المنشورات العلمية والتقنية رقم: 580

الأمراض الحيوانية المصدر والأمراض السارية المشتركة بين الإنسان والحيوانات

الطبعة الثالثة

الجزء الأول: الأمراض الناجمة عن الجراثيم والفطريات

بيدرو ن. آتشا وبوريس تسيفيرس



صدرت الطبعة الأنكليزية عن
منظمة الصحة العالمية
الإقليم الأمريكي
PAHO

صدرت الطبعة العربية عن
منظمة الصحة العالمية
إقليم شرق المتوسط
EMRO

الأمـراض الحيـوانية المصـدر
والأمراض السارية المشتركة
بين الإنسان والحيوانات

الطبعة الثالثة

الجزء الأول: الأمراض الناجمة عن الجراثيم والفطريات

بيدرو ن. آتشا وبوريس تسيفيرس



صدرت الطبعة الأنكليزية عن
منظمة الصحة العالمية
الإقليم الأمريكي
2003

صدرت الطبعة العربية عن
منظمة الصحة العالمية
إقليم شرق المتوسط
2006

الأمراض الحيوانية المصدر والأمراض السارية المشتركة بين الإنسان والحيوانات – الطبعة الثالثة

Zoonoses and Communicable Diseases Common to Man and Animals – Third Edition

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1. **الجدول**

[illegible]

بسم الله الرحمن الرحيم

تقديم

الدكتور حسين عبد الرزاق الجزائري
المدير الإقليمي لمنظمة الصحة العالمية لشرق المتوسط

شهدت العقود الأخيرة ازدياد أهمية الأمراض الحيوانية المصدر والتي يشترك في المعاناة من ويلاتها الناس والحيوانات معاً، إلى جانب ازدياد وتعقيد وسائل المواصلات، وهو أمر أدَّى في مقابل ذلك إلى تسريع وتسهيل نشر العوامل الناقلة للأمراض، وإلى تضاؤل دور التباعُد في المسافات، فلم يَعُدْ بمقدور أي فرد أو مجموعة أن يكون بمأمن عن الإصابة بهذه الأمراض، ورغم قطع خطوات كبيرة على درب التقدُّم العلمي والتكنولوجي في تشخيص وتصنيف هذه الأمراض، ورغم الإنجازات الكبيرة التي تحقَّقت في مضمار المعالجة والوقاية منها، فإن هذه الأمراض لاتزال تشكِّل تهديداً خطيراً للصحة في العالم. وقد قام الزملاء في المكتب الإقليمي الأمريكي للصحة العالمية بإعداد هذا السفر حول الأمراض الحيوانية المصدر في ثلاثة أجزاء متكاملة، فلم نتردَّد في نقل فوائد هذا الجهد إلى بلداننا، بترجمته إلى اللغة العربية، وقد ساعدنا المركز العربي للتعريب والترجمة والتأليف والنشر في تحقيق ذلك، وهو أحد المراكز المتخصِّصة لجامعة الدول العربية، ويعمل من مقره في دمشق على توفير المواد التعليمية والتدريبية باللغة العربية للمؤسسات الأكاديمية والمهنية وللجامعات العربية، فجاءت الترجمة مثالاً على الاجتهاد في وضع تسميات جديدة باللغة العربية لكائنات لم تكن قد عرفت لها تسميات من قبل، وفي ذلك من التحدِّي ما يدفعنا للإشادة بالعاملين الصامتين الذين ساهموا في إنجاز هذا العمل، ولا يفوتنا أن نؤكِّد على أن نجاح هذه الجهود ينبغي أن يترجم في حيِّز التطبيق بالاستفادة من مضمون هذا الكتاب ووضعه موضع التطبيق العملي، وتحديثه ونشر ما حفل به من معلومات على أوسع نطاق، وفي الختام، يرحِّب المكتب الإقليمي بتلقِّي أي ملاحظات لاستكمال خصوصية البلدان العربية ولغتها في هذا الصدد.

والله الحق وهو يهدي على السبيل القويم.

الدكتور حسين عبد الرزاق الجزائري
المدير الإقليمي لمنظمة الصحة العالمية
لشرق المتوسط

[illegible]

[illegible]

[illegible] (PAHO) [illegible]

safety

1951 (PANAFTOSA)

15 (INPPAZ)

1991

(CEPANZO)

1956

.1990

1902

1986

[illegible] emerging [illegible] reemerging [illegible]

[illegible]

MIRTA ROSES PERIAGO [illegible]

[illegible]

[illegible] zoonoses [illegible]

[illegible] 150 [illegible]

[illegible]

.metazooses

PEDRO N.ACHA

BORIS SZYFRES

[illegible] models [illegible] Rickettsia prowazekii [illegible] 1922 [illegible] kuru [illegible] scrapie [illegible] pandemics [illegible]

[illegible] Lyme [illegible] 1982 [illegible] 1977

[illegible] Borrelia burgdorferi [illegible] Rocio [illegible] Oropouche [illegible] Rift Valley [illegible] Cryptosporidium [illegible]

[illegible] 1986 [illegible] 1983 [illegible] pseudorabies [illegible] 1986 [illegible] 51 [illegible] Ehrlichia canis [illegible]

[illegible] monographs [illegible]

[illegible]

[illegible] (PAHEF) [illegible]

PEDRO N. ACHA

BORIS SZYFRES

[illegible]

[illegible] (2) [illegible] (1) [illegible] (3) [illegible]

[illegible] ICD 10 [illegible]

[illegible]

[illegible]

الجزء الأول

الأمراض الجرثومية

ACTINOMYCOSIS

ICD-10 A42.9

Actinostreptotrichosis

Ray Fungus disease

Actinomyces israelii

A.bovis

meyeri *odontolytical* *viscosus* *A.naeslundi*

Arachnia propionica

Brunner *et al.*, 1973) (George, 1974)

(Burden, 1989)

100

12 368 (Burden, 1989)

(1968 – 1957) 0.665

(Wilson, 1984)

10

Valid

%50

%70

(Burden, 1989)

(Valicenti *et al.*, 1982)

%5.3

%1.6

[illegible] 478 [illegible] (Koebler *et al*., 1983) [illegible] %12.6 [illegible] (Burden, 1989) [illegible]

[illegible]

[illegible]

[illegible]

[illegible] *A.suis* [illegible]

[illegible] empyemas [illegible] 1982 [illegible] .(Hardie and Barsanti, 1982)

[illegible] %40 [illegible] %48 [illegible] %30 [illegible] .(Benenson, 1992) [illegible] %10 [illegible]

[illegible] (Lerner, 1991) [illegible] 1960 [illegible]

[illegible] actinobacillosis [illegible]

(Cottral, 1978)

(12)

Ajello, L., L.K. Georg, W. Kaplan, L. Kaufman. *Laboratory Manual for Medical Mycology*. Washington, D.C.: U.S. Government Printing Office; 1963. (Public Health Service Publication 994).

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Brunner, D.W., J.H. Gillespie. *Hagan's Infectious Diseases of Domestic Animals*. 6th ed. Ithaca: Comstock; 1973.

Burden P. Actinomycosis [editorial]. *J Infect* 19:95–99, 1989.

Cottral, G.E., ed. *Manual of Standardized Methods for Veterinary Microbiology*. Ithaca: Comstock; 1978.

Dalling, T., A. Robertson, eds. *International Encyclopaedia of Veterinary Medicine*. Edinburgh: Green; 1966.

Georg, L.K. The agents of human actinomycosis. Cited in: Lerner, P.I. *Actinomyces* and *Arachnia* species. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Hardie, E.M., J.A. Barsanti. Treatment of canine actinomycosis. *J Am Vet Assoc* 180:537–541, 1982.

Koebler, C., A. Chatwani, R. Schwartz. Actinomycosis infection associated with intrauterine contraceptive devices. *Am J Obstet Gynecol* 145:596–599, 1983.

Lerner, P.I. *Actinomyces* and *Arachnia* species. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Pier, A.C. The actinomycetes. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Valicenti, J.F., Jr., A.A. Pappas, C.D. Graber, H.O. Williamson, N.F. Willis. Detection and prevalence of IUD-associated *Actinomyces* colonization and related morbidity. A prospective study of 69,925 cervical smears. *JAMA* 247:1149–1152, 1982.

Wilson, G. Actinomycosis, actinobacillosis, and related diseases. *In*: Smith, G.R., ed. Vol 3: *Topley and Wilson's Principles of Bacteriology, Virology and Immunity*. Baltimore: Williams & Wilkins; 1984.

AEROMONIASIS [illegible]

[illegible]

ICD 10 A05.8 other specified bacterial foodborne intoxications

Vibrionaceae [illegible] *Aeromonas* [illegible] *.Aeromonadaceae* [illegible] pathogen [illegible] *A.salmonicida* [illegible] °37 [illegible] 3-1 [illegible] *A.cavae* [illegible] *A.sorbia* [illegible] *A.hydrophila* [illegible] (Janda and Duffey, 1988) ([illegible]) [illegible] *.A.schubertii* [illegible] *A.veronii* [illegible] *.A.trota.* [illegible] *A.jandaei* [illegible]

[illegible] 13 [illegible] %95 [illegible] .(Janda, 1991) [illegible]

[illegible] (O) [illegible] 40 [illegible] (R) [illegible] O [illegible]

(Sakazaki and ... R ... .Shimada, 1984)

... .(Von Graevenitz and Altwegg, 1991) ...

... S ... 10000 ... 1000 ...

... S ...

... 0.06 ...

... %20 ... %5 ...

.(Janda, 1991) ...

... (Janda, 1991) ...

[illegible] 0.05 [illegible] .(Nieto *et al.*, 1991) [illegible]

[illegible] 4 [illegible] 9 [illegible] 11 [illegible] 7 10 x 3 [illegible] .(Mateos *et al.*, 1993) [illegible] °28 [illegible] °37

[illegible] .(Stelma, 1989) [illegible]

[illegible] 472 [illegible] 1982 [illegible] 1983 [illegible] 1982 [illegible] 7 [illegible] 28 [illegible] 23 [illegible] %70 [illegible]

[illegible] (Abeyta *et al.*, 1986) [illegible] (Stelma, 1989) [illegible]

[illegible] (Stoskopf, 1993) [illegible]

[illegible] (Notario *et al.*, 1993) [illegible] 400 [illegible] (%2) [illegible] 8 [illegible] 230 [illegible] %1.1 [illegible] (Agger *et al.*, 1985) [illegible]

[illegible] 5 [illegible] 6 [illegible]

10

(Janda and Duffey, 1988)

Hirudo 20 (*medicinalis*

(Lineaweaver *et al*., 1992)

(Janda and Duffey, 1988)

(Gutierrez *et al.*, 1993)

(Stoskopf, 1993)

(*Cyprinus Carpio*)

(Sioutas *et al.*, 1991)

(*Rhamdia Sopa*)

.(Angelini and Seigneur, 1988)

(*Mugil Cephalus*)

.(Soliman *et al.*, 1989)

(*Rana Cetesbeiana*)

.1972 1971

%20 %70

%10

24 Operculum

6

.(Glorioso *et al.*, 1974)

(*Xenipus leavis*)

(*Pipidae*)

3

48 (22°

50 14

.(Bravo Farinas *et al.*, 1989)

[illegible] .10000 [illegible] %80 [illegible]
.(Rafidah *et al*., 1990) [illegible]
[illegible]
[illegible] .%10 [illegible]
.(Jacobson, 1984) [illegible]
Caracal [illegible]
[illegible] (*Felis caracal* [illegible])
[illegible]
[illegible] .(Ochilo and Spencer, 1989) [illegible]
(Hiruma *et al.*, [illegible] 3 [illegible] .1986)
[illegible] .(Love and Love, 1984) [illegible]
16 [illegible] 3 [illegible] .%1 [illegible] %10 [illegible]
[illegible] toucan [illegible]
[illegible]
(Shane *et al.*, [illegible] 15 [illegible]

[illegible] .1984)
[illegible] (Garcia *et al*., 1992) [illegible] (*Amazona versicolor*
[illegible]

[illegible] 12 [illegible]
.(Picard and Goullet, 1987)

[illegible] 20 [illegible] 2000 [illegible] 100/ [illegible]
.(Van der Looij, 1988) [illegible] 100/ [illegible]
[illegible] (Altweeg *et al*., 1991) [illegible]
[illegible]

[illegible] (Pathak *et al.*, 1988) [illegible]
[illegible]

[illegible]

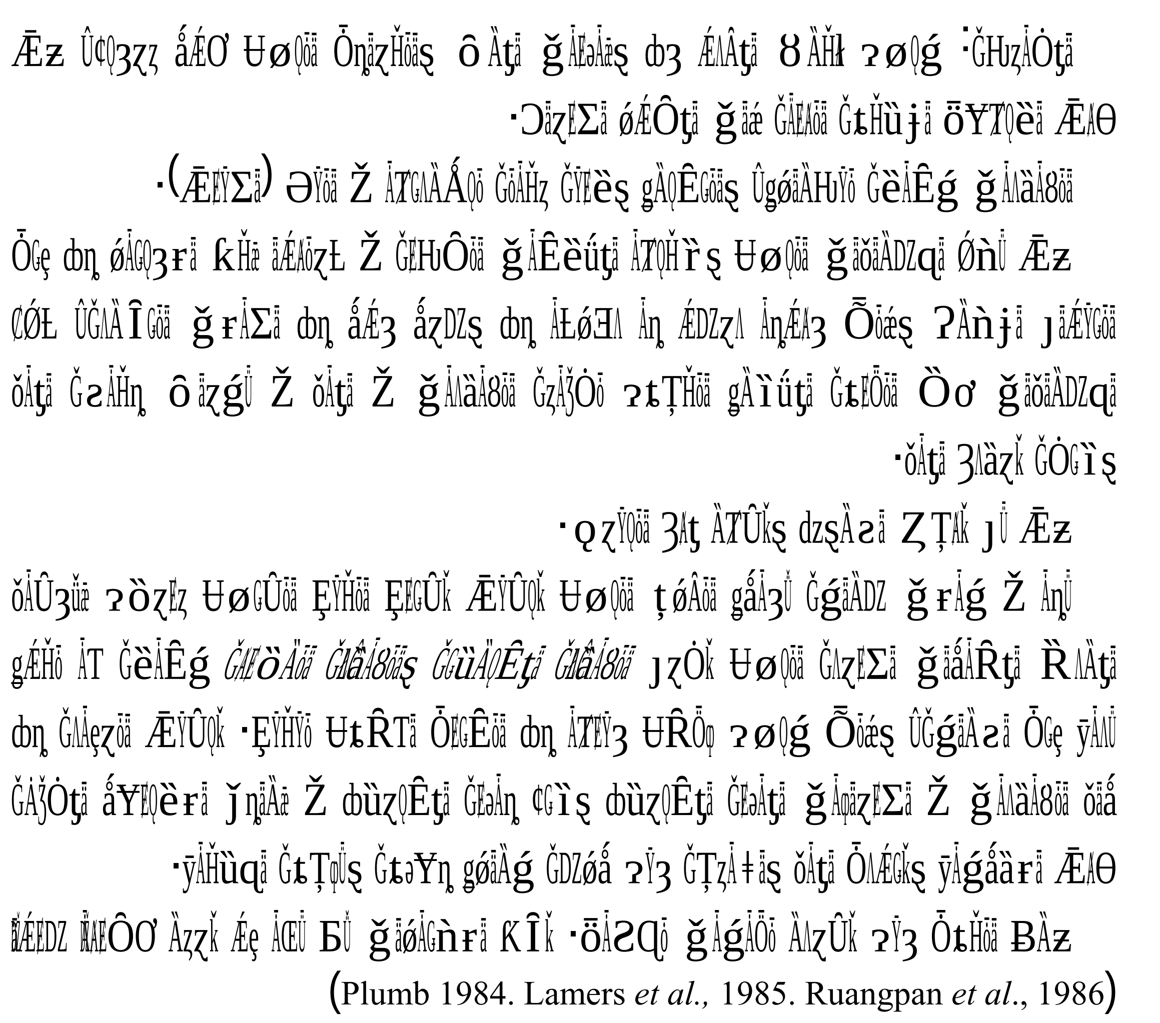
[illegible] 38 [illegible]

[illegible] (Altwegg *et al.*, 1991) [illegible]

[illegible] 5 [illegible]

[illegible]

[illegible]



(Plumb 1984. Lamers *et al.,* 1985. Ruangpan *et al.*, 1986)

Abeyta, C., C.A. Kaysner, M.A. Wekell, *et al.* Recovery of *Aeromonas hydrophila* from oysters implicated in an outbreak of foodborne illness. *J Food Protect* 49:643–644, 1986.

Agger, W.A., J.D. McCormick, M.J. Gurwith. Clinical and microbiological features of *Aeromonas hydrophila* associated diarrhea. *J Clin Microbiol* 21:909–913, 1985.

Altwegg, M., G. Martinetti Lucchini, J. Lüthy-Hottenstein, M. Rohr-Bach. *Aeromonas*-associated gastroenteritis after consumption of contaminated shrimp. *Europ J Clin Microbiol Infect Dis* 10:44–45, 1991.

Angelini, N.M., G.N. Seigneur. Enfermedad de las aletas de *Rhamdia sapo*. Aislamiento de los agentes etiológicos e infección experimental. *Rev Argent Microbiol* 20:37–48, 1988.

Bravo Fariñas, L., R.J. Monté Boada, R. Cuellar Pérez, S.C. Dumas Valdiviezo. *Aeromonas hydrophila*, infección en *Xenopus leavis*. *Rev Cubana Med Trop* 41:208–213, 1989.

García, M.E., A. Domenech, L. Dominguez, *et al.* *Aeromonas hydrophila* in a pet parrot (*Amazona versicolor*). *Avian Dis* 36:1110–1111, 1992.

García-López, M.L., A. Otero, M.C. García-Fernández, J.A. Santos. Incidencia, comportamiento y control de *Aeromonas hydrophila* en productos cárnicos y lácteos. *Microbiologia* 9:49–56, 1993.

Glorioso, J.C., R.L. Amborski, G.F. Amborski, D.D. Culley. Microbiological studies on septicemic bullfrogs (*Rana catesbeiana*). *Am J Vet Res* 35:1241–1245, 1974.

Gutiérrez, J., M.C. Nogales, M.C. Aretio, E. Martín. Patrón de sensibilidad de las *Aeromonas* spp. productoras de infecciones extraintestinales. *An Med Interna* 10:65–67, 1993.

Hiruma, M., K. Ike, T. Kume. Focal hepatic necrosis in young ferrets infected with *Aeromonas* spp. *Jpn J Vet Sci* 48:159–162, 1986.

Jacobson, E.R. Biology and diseases of reptiles. *In*: Fox, J.G., B.J. Cohen, F.M. Loew, eds. *Laboratory Animal Medicine*. Orlando: Academic Press; 1984.

Janda, J.M. Recent advances in the study of taxonomy, pathogenicity, and infectious syndromes associated with the genus *Aeromonas*. *Clin Microbiol Rev* 4:397–410, 1991.

Janda, J.M., P.S. Duffey. Mesophilic aeromonads in human disease: Current taxonomy, laboratory identification, and infectious disease spectrum. *Rev Infect Dis* 10:980–997, 1988.

Lamers, C.H., M.J. De Haas, W.B. Muiswinkel. Humoral response and memory formation in carp after infection of *Aeromonas hydrophila* bacterin. *Dev Comp Immunol* 9:65–75, 1985.

Lineaweaver, W.C., M.K. Hill, G.M. Buncke, *et al*. *Aeromonas hydrophila* infections following use of medicinal leeches in replantation and flap surgery. *Ann Plast Surg* 29:238–244, 1992.

Love, R.J., D.N. Love. *Aeromonas hydrophila* isolated from polyarthritis in a calf. *Aust Vet J* 61:65, 1984.

Mateos, O., J. Anguita, G. Navarro, C. Paniagua. Influence of growth temperature on the production of extracellular virulence factors and pathogenicity of environmental and human strains of *Aeromonas hydrophila*. *J Appl Bacteriol* 74:111–118, 1993.

Nieto, T.P., Y. Santos, L.A. Rodríguez, A.E. Ellis. An extracellular acetylcholinesterase produced by *Aeromonas hydrophila* is a major toxin for fish. *Microbiol Pathogenesis* 11:101–110, 1991.

Notario, R., E. Careno, N. Borda, *et al*. *Aeromonas* spp. en niños con síndrome diarreico agudo. *Infect Microbiol Clin* 5:85–89, 1993.

Ocholi, R.A., T.H. Spencer. Isolation of *Aeromonas hydrophila* from a captive caracal lynx (*Felis caracal*). *J Wildl Dis* 25:122–123, 1989.

Pathak, S.P., J.W. Bhattache, N. Kalra, S. Chandra. Seasonal distribution of *Aeromonas hydrophila* in river water and isolation from river fish. *J Appl Bacteriol* 65:347–352, 1988.

Picard, B., Goullet P. Epidemiological complexity of hospital aeromonas infections revealed by electrophoretic typing of esterases. *Epidemiol Infect* 98:5–14, 1987.

Plumb, J.A. Immunisation des poissons d'eau chaude contre cinq agents pathogenes impartants. Symposium sur la vaccination des poissons. Paris, Office Internationale des Epizooties (OIE), 20–22 février 1984.

Rafidah, J., B.L. Ong, S. Saroja. Outbreak of "red leg"—An *Aeromonas hydrophila* infection in frogs. *J Vet Malaysia* 2:139–142, 1990.

Ruangpan, L., I. Kitao, I. Yoshida. Protective efficacy of *Aeromonas hydrophila* vaccines in nile tilapia. *Vet Immunol Immunopathol* 12:345–350, 1986.

Sakazaki, R., T. Shimada. O-serogrouping scheme for mesophilic *Aeromonas* strains. *Jpn J Med Sci Biol* 37:247–255, 1984.

Shane, S.M., K.S. Harrington, M.S. Montrose, R.G. Roebuck. The occurrence of *Aeromonas hydrophila* in avian diagnostic submissions. *Avian Dis* 28:804–807, 1984.

Sioutas, S., R.W. Hoffmann, C. Pfeil-Putzien, T. Scherl. Carp erythrodermatitis (CE) due to an *Aeromonas hydrophila* infection. *J Vet Med B* 38:186–194, 1991.

Soliman, M.K., M. el S. Easa, M. Faisal, *et al.* Motile *Aeromonas* infection of striped (grey) mullet, *Mugil cephalus*. *Antonie Van Leeuwenhoek* 56:323–335, 1989.

Stelma, G.N. *Aeromonas hydrophila*. *In*: Doyle, M.T., ed. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Stoskopf, M.K. Bacterial diseases of goldfish, koi and carp. *In*: Stoskopf, M.K., ed. *Fish Medicine*. Philadelphia: W.B. Saunders; 1993.

Van der Kooij, D. Properties of aeromonads and their occurrence and hygienic significance in drinking water. *Zbl Bakteriol Mikrobiol Hyg* 187B:1–17, 1988.

Von Graevenitz, A., M. Altwegg. *Aeromonas* and *Plesiomonas*. *In*: Balows, A., K.L. Herrmann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

[illegible]
ANIMAL ERYSIPELAS AND HUMAN ERYSIPELOID

ICD 10 A26.0 cutaneous erysipeloid [illegible]

[illegible] erysipelotrichosis

(*Erysipelothrix* [illegible] *rhusiopathiae insidiosa*) [illegible] 2.5 – 0.6 [illegible] rugose [illegible] (Jones, 1986) [illegible] 15 [illegible] 5 [illegible] (2b Norrung [illegible] 2a [illegible] 1b [illegible] 1a [illegible] (23 [illegible] 1 [illegible]) 23 [illegible] 1987 [illegible] .(Norrung and Molin, 1991) [illegible] 26 [illegible] 1991 [illegible] *et al.*, 1987) [illegible]

[illegible] *E.tonsillarum* [illegible]

.(Takahashi *et al.*, 1987) [illegible]

[illegible] 18 [illegible] 13 [illegible]

.(Takahashi, 1992) [illegible]

[illegible]

[illegible] 154 [illegible] 13 [illegible] 1958 - 1956 [illegible] 3000 [illegible] 1970 [illegible] 1961 [illegible] 15 [illegible] 1959 [illegible]

[illegible]

.(Skoknic *et al.*, 1981) [illegible]

4-2

49 (McClain, 1991)

(Gorby and Peacock, 1988) 15

%40

%40 %38

%17

(%24) (%36) (%92)

500 1955

1989

(McClain, 1991)

[illegible]

[illegible] (Timoney *et al.*, 1988) [illegible]

[illegible] (Blood and Radostatis 1989 ; Timoney *et al.*, 1988) [illegible]

[illegible] 2 [illegible] (1b, 1a [illegible]) 1 [illegible] 2 [illegible] 1a [illegible] 300 [illegible] 2, 1 [illegible] 2 [illegible] 1b [illegible] 1a [illegible]

%9.7 1a 21 11 8 6 5 3 %6.7

1a

(Takahashi, 1987)

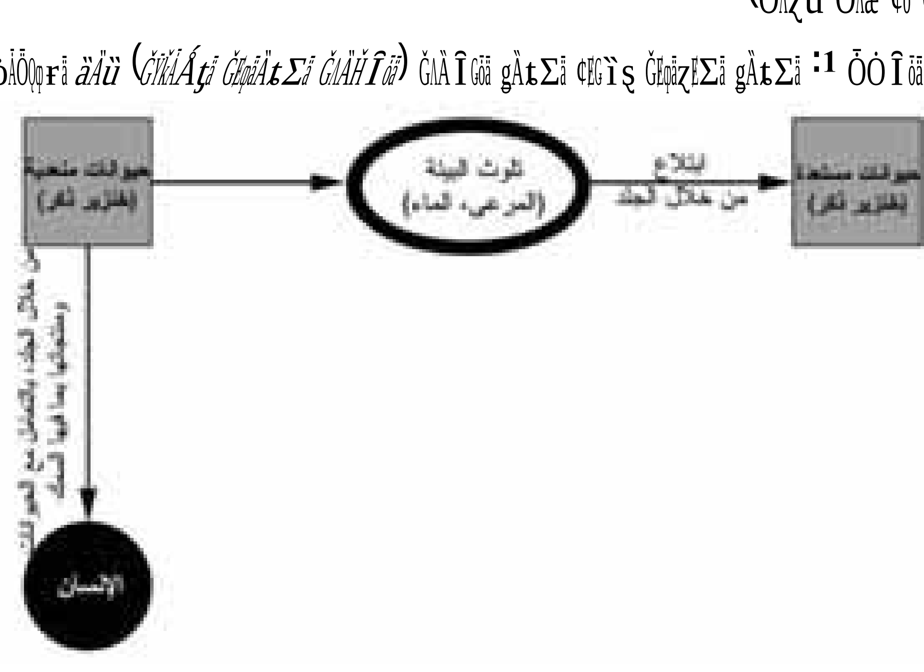
%0.03

1b

(Eamens *et al.*, 1988) 2 1a

(Griffiths *et al.*, 1991)

%25 %2.5



%30

(Skoknic *et al.*, 400 %53.5

%25.6 1981)

(Wood and Harrington, 1978)

.(Takahashi, 1987)

(de Diego and Lavalle, 1977)

.22 21

14 disseminators

112 (%33.9) 38

.(Shiono *et al*., 1990)

40 40 9 2

.(Gilabert, 1968)

.(Timoney *et al*., 1988)

endemism

(Bile and Doyle, 1991)

°35 ... 7

(Bercovich *et al.*, 1981)

(Kirchhoff *et al.*, 1985)

(Timoney *et al.*, 1988)

(Bricker and Saif, 1983)

Bercovich, Z., C.D. Weenk van Loon, C.W. Spek. Serological diagnosis of *Erysipelothrix rhusiopathiae*: A comparative study between the growth inhibition test and the complement fixation test. *Vet Quart* 3:19–24, 1981.

Bille, J., M.P. Doyle. *Listeria* and *Erysipelothrix*. *In*: Ballows, A., W.J. Hausler, Jr., K.L. Hermann, *et al. Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Blood, D.C., O-M. Radostits. *Veterinary Medicine*. 7th ed. London: Baillière Tindall; 1989.

Bricker, J.M., Y.M. Saif. Drinking water vaccination of turkeys, using live *Erysipelothrix rhusiopathiae*. *J Am Vet Med Assoc* 183:361–362, 1983.

de Castro, A.F.P., O. Campedelli Filho, C. Troise. Isolamento de *Erysipelothrix rhusiopathiae* de peixes marítimos. *Rev Inst Med Trop Sao Paulo* 9:169–171, 1967.

de Diego, A.I., S. Lavalle. *Erysipelothrix rhusiopathiae* en aguas y pescados de la costa atlántica de la provincia de Buenos Aires (Argentina). *Gac Vet* 39:672–677, 1977.

Eamens, G.J., M.J. Turner, R.E. Catt. Serotypes of *Erysipelothrix rhusiopathiae* in Australian pigs, small ruminants, poultry, and captive wild birds and animals. *Aust Vet J* 65:249–252, 1988.

Gilabert, B. Endocarditis bacteriana producida por *Erysipelothrix*. Primer caso humano verificado en Chile. *Bol Hosp San Juan de Dios* 15:390–392, 1968. Cited in: Skoknic, A., I. Díaz, S. Urcelay, R. Duarte, O. González. Estudio de la erisipela en Chile. *Arch Med Vet* 13:13–16, 1981.

Gledhill, A.W. Swine erysipelas. *In*: Stableforth, A.W., I.A. Galloway, eds. *Infectious Diseases of Animals*. London: Butterworths; 1959.

Gorby, G.L., J.E. Peacock, Jr. *Erysipelothrix rhusiopathiae* endocarditis: Microbiologic, epidemiologic, and clinical features of an occupational disease. *Rev Infect Dis* 10:317–325, 1988.

Griffiths, I.B., S.H. Done, S. Readman. *Erysipelothrix* pneumonia in sheep. *Vet Rec* 128:382–383, 1991.

Jones, D. Genus *Erysipelothrix*, Rosenbach 1909. *In*: Sneath, P.H., H.S. Mair, M.E. Sharpe, eds. Vol. 2: *Bergey's Manual of Systemic Bacteriology*. Baltimore: Williams & Wilkins; 1986.

Kirchhoff, H., H. Dubenkroop, G. Kerlen, *et al.* Application of the indirect enzyme immunoassay for the detection of antibodies against *Erysipelothrix rhusiopathiae*. *Vet Microbiol* 10:549–559, 1985.

Levine, N.D. Listeriosis, botulism, erysipelas, and goose influenza. *In*: Biester, H.E., L.H. Schwarte, eds. *Diseases of Poultry*. 4th ed. Ames: Iowa State University Press; 1959.

McClain, J.B. *Erysipelothrix rhusiopathiae In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Nelson, E. Five hundred cases of erysipeloid. *Rocky Mt Med J* 52:40–42, 1955. Cited in: Gorby, G.L., J.E. Peacock, Jr. *Erysipelothrix rhusiopathiae* endocarditis: Microbiologic, epidemiologic, and clinical features of an occupational disease. *Rev Infect Dis* 10:317–325, 1988.

Norrung, V., G. Molin. A new serotype of *Erysipelothrix rhusiopathiae* isolated from pig slurry. *Acta Vet Hung* 39:137–138, 1991.

Norrung, V., B. Munch, H.E. Larsen. Occurrence, isolation and serotyping of *Erysipelothrix rhusiopathiae* in cattle and pig slurry. *Acta Vet Scand* 28:9–14, 1987.

Rocha, M.P., P.R.S. Fontoura, S.N.B. Azevedo, A.M.V. Fontoura. *Erysipelothrix* endocarditis with previous cutaneous lesion: Report of a case and review of literature. *Rev Inst Med Trop Sao Paulo* 31:286–289, 1989.

Shiono, H., H. Hayashidani, K-I. Kaneko, *et al.* Occurrence of *Erysipelothrix rhusiopathiae* in retail raw pork. *J Food Protect* 53:856–858, 1990.

Shuman, R.D., R.L. Wood. Swine erysipelas. *In*: Dunne, H.W., ed. *Diseases of Swine*. 3rd ed. Ames: Iowa State University Press; 1970.

Skoknic, A., I. Díaz, S. Urcelay, R. Duarte, O. González. Estudio de la erisipela en Chile. *Arch Med Vet* 13:13–16, 1981.

Takahashi, T. Studies on serotypes, antibiotic resistance, and pathogenic characteristics of *Erysipelothrix rhusiopathiae*. *Bull Nipon Vet Zootechn College* 36:153–156, 1987.

Takahashi, T., T. Fujisawa, T. Benno, *et al. Erysipelothrix tonsillarum* sp. nov. isolated from tonsils of apparently healthy pigs. *Int J Syst Bacteriol* 37:166–169, 1987.

Takahashi, T., T. Fujisawa, Y. Tamura, *et al.* DNA relatedness among *Erysipelothrix rhusiopathiae* strains representing all twenty-three serovars and *Erysipelothrix tonsillarum*. *Int J Syst Bacteriol* 42:469–473, 1992.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

Wood, R.L. *Erysipelothrix infection*. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Wood, R.L., R. Harrington. Serotypes of *Erysipelothrix rhusiopathiae* isolated from swine and from soil and manure of swine pens in the United States. *Am J Vet Res* 39:1833–1840, 1978.

Wood, R.L., R. Harrington, D.R. Hubrich. Serotypes of previously unclassified isolates of *Erysipelothrix rhusiopathiae* from swine in the United States and Puerto Rico. *Am J Vet Res* 42:1248–1250, 1981.

ANTHRAX

A22.1 ICD-10 A22.0

A22.2

ICD-10 A22.0 cutaneous anthrax; A22.1 pulmonary anthrax;

A22.2 gastrointestinal anthrax

Charbon . Carbuncle .

Bacillus anthracis

5-3

(Little and Knudson, 1986).

31 ... 1977 ... 1973 ... 1587 ... 500 ...
.(La Force, 1978)

... 1992 ... 30 ...
.(Okolo, 1985) ...
... 200 ...
... 8 ...
.(Ngampachjana *et al.*, 1989) ...
... 59 ... 6 ...

14 (Abdenour *et al.*, 1987) 178 1917 15000 1985 (Marshall, 1991).

1978 (17, 5, 15) 19 854 1957 (16) 254 237

1979 40 64 79 96 (10) 1975 (1988) (24) 42

[illegible] (%22.7) 34 [illegible] 150 [illegible] %14.3 [illegible] 70 [illegible] %42.9 [illegible] 35 [illegible] 15 [illegible] 8 [illegible] 43 [illegible] .(13)

[illegible] .(7) [illegible]

[illegible] %11 [illegible] %54 [illegible] 10 [illegible] 1635 [illegible] .1974 [illegible] 1966 [illegible] .(4) [illegible] 4 [illegible] 1987 [illegible] (*Hippopotamus amphibius* [illegible]) [illegible] (*Syncerus caffer*) [illegible] (*Loxodonta africana*) [illegible] .(21)

[illegible]

17.000 – 12.000

epizootic

(1991)

40

2

(Braderic and Punda-Polic, 1992)

(23) 6

1974

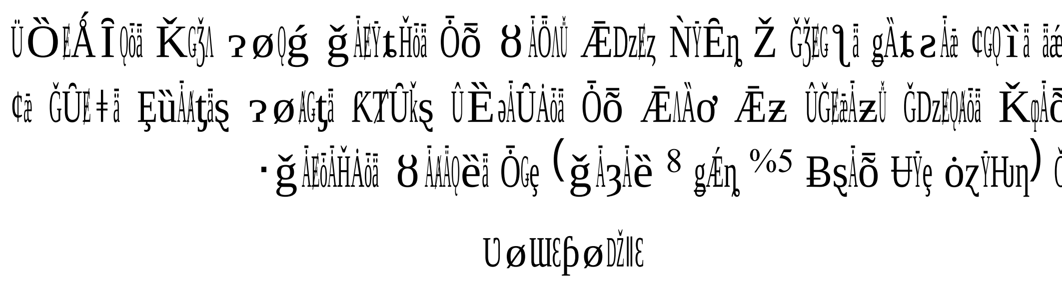
%83

218

(25)

%94

[illegible]



Abdenour D., B. Larouze, D. Dalichaouche, M. Aouati. Familial occurrence of anthrax in Eastern Algeria [letter]. *J Infect Dis* 155:1083–1084, 1987.

Brachman, P.S. Anthrax. *In*: Warren, K.S., A.A.F. Mahmoud, eds. *Tropical and Geographical Medicine*. New York: McGraw-Hill Book Co.; 1984.

Braderic N., V. Punda-Polic. Cutaneous anthrax due to penicillin-resistant *Bacillus anthracis* transmitted by an insect bite [letter]. *Lancet* 340:306–307, 1992.

Ebedes, H. Anthrax epizootics in wildlife in the Etosha Park, South West Africa. *In*: Page, L.A., ed. *Wildlife Diseases*. New York: Plenum Press; 1976.

Fragoso Uribe, R., H. Villicaña Fuentes. Antrax en dos comunidades de Zacatecas, México. *Bol Oficina Sanit Panam* 97:526–533, 1984.

Harrison, L.H, J.W. Ezzel, T.G. Abshire, *et al.* Evaluation of serologic tests for diagnosis of anthrax after an outbreak of cutaneous anthrax in Paraguay. *J Infect Dis* 160:706–710, 1989.

Hunter, L., W. Corbett, C. Grinden. Anthrax. Zoonoses update. *J Am Vet Med Assoc* 194:1028–1031, 1989.

La Force, F.M. Informe a la Oficina Sanitaria Panamericana. Haiti, 1978.

Little, S.F., G.B. Knudson. Comparative efficacy of *Bacillus anthracis* live spore vaccine and protective antigen vaccine against anthrax in the guinea pig. *Infect Immun* 52: 509–512, 1986.

Marshall, E. Sverdlovsk: Anthrax capital? [news and comments]. *Science* 240:383–385, 1988.

Ngampochjana, M., W.B. Baze, A.L. Chedester. Human anthrax [letter]. *J Am Vet Med Assoc* 195:167, 1989.

Okolo, M.I. Studies on anthrax in food animals and persons occupationally exposed to the zoonoses in Eastern Nigeria. *Int J Zoonoses* 12:276–282, 1985.

Okolo, M.I. Prevalence of anthrax in emergency slaughtered food animals in Nigeria. *Vet Rec* 122:636, 1988.

World Health Organization. *Joint FAO/WHO Expert Committee on Zoonoses. Third Report*. Geneva: WHO; 1967. (Technical Report Series 378).

Rey, J.L., M. Meyran, P. Saliou. Situation épidémiologique de charbon human en Haute Volta. *Bull Soc Pathol Exot* 75:249–257, 1982.

Simaga, S.Y., E. Astorquiza, M. Thiero, R. Baylet. Un foyer de charbon humain et animal dans le cercle de Kati (République du Mali). *Bull Soc Pathol Exot* 73:23–28, 1980.

Sirisanthana, T., M. Navachareon, P. Tharavichitkul, *et al.* Outbreak of oral-pharyngeal anthrax: An unusual manifestation of human infection with *Bacillus anthracis*. *Am J Trop Med Hyg* 33:144–150, 1984.

Sirisanthana, T., K.E. Nelson, J.W. Ezzell, T.G. Abshire. Serological studies of patients with cutaneous and oral-orophangyngeal anthrax from northern Thailand. *Am J Trop Med Hyg* 39:575–581, 1988.

Sirol, J., Y. Gendron, M. Condat. Le charbon humain en Afrique. *Bull WHO* 49:143–148, 1973.
Sterne, M. Anthrax. *In*: Stableforth, A.W., I.A. Galloway, eds. *Infectious Diseases of Animals*. London: Butterworths; 1959.
Turnbull, P.C., R.H. Bell, K. Saigawa, *et al.* Anthrax in wildlife in the Luangwa Valley, Zambia. *Vet Rec* 128:399–403, 1991.
Turnbull, P.C., M.G. Broster, A. Carman, *et al.* Development of antibodies to protective antigen and lethal factor components of anthrax toxin in humans and guinea pigs and their relevance to protective immunity. *Infect Immun* 52:356–363, 1986.
Van Ness, G.B. Ecology of anthrax. *Science* 172:1303–1307, 1971.
Wade, N. Death at Sverdlovsk: A critical diagnosis. *Science* 209:1501–1502, 1980.
Whitford, H.W. Anthrax. *In*: Steele, J.H., H. Stoenner, W. Kaplan, M. Torten, eds. Vol I, Section A: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1979.
Wright, G.G. Anthrax. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

BOTULISM (Ĭƨĭʅǋǁɛ) Ĭƨɯƨǁɛ !ǅƨǂǁɛ

ICD-10 A05.1

ɄȪǅÊǟ ȴȶÊǫǟ) "lamziekte ʒǞǟ ǒǻ" ǖAllantiasis ĘǅÊǟ ȴȶÊǫǟ :ğȧǻǟȶǟ ·(ǿȥɄÛǟ Ž ɄȪǅÊǟ ȴȶÊǫǟ) "limberneck ǦɕǞǟ ǒơǿǟ ô Ǟɳ" ǖ(ǞȪǞȥǖ āȥǅ Ž ɃǞȪǦǟ

ɄŁ Ʉøǫǟʂ ǖ*Clostridium botulinum* *ǦȪ̀ỉȥǟ ǦǰÛȶǟ* ǞƬǅǫǨ ğǞǞǞǽ :ğǞǦÊǟ ȸȶȓ (31) ǨʒǞǼ Ǽɕʂ ·ȟǟȥǟɊǒ ȪȮÎɳ ɃǿǞǅǕ ɄǟȥŁ ɍ *ǦȪ̀ỉȥǟ ǦǰÛȶǟ* ·ǦȥȞȥ ǞǰõȷǞ ȓǞƴǕ ʒɕè ǨȥǞǞǫèǟ ·ǦǅȥʂǨÊǟ ğǟǞȶǟʂ ţǿǞǟ ǼÊǵ (IV БǕ I ȸɳ) ğǞʒȥȶƒ ʒǿǕ ȴǅǞ ·ǦǅȥʂǨÊǟ ǞƬǫʒȥǞ ǞǦǨ (G ← A) (ǦȪ̀ỉȥǟ) ǦȪǅÊǟ ğǟɌǫÊɳ ȸɳ ǦǞǫƯ Ž ·ȳǞǞÛǟ ʒɳ ǦǞǫȶǟ ȷȥȮǫǟ ǦǦÊȶǟ ğǞǞǞØǟ ȸʒ (ɄȮèŸȮǟ) ǻȥƬȶǟ ɄȪǅÊǟ ȴȶÊǫǟ Ùỿ ȣǞǞǫèǟ :1976 ȳǞʒ Ž ·āǞȮȶǟ ǰÊǞǟ ɋȥǞ ȸɳ ȷǞǞǾǟ ȪȮÎǫ ǳǞƨǟ ȴȶÊǨ ɃǼǞȶǟ ȪǦÊǟ ǿǞȶǞǫèǟ ȸʒ ȴǅǞʂ ǖ(ɄǞǞÛǟ) ʒȓǞǟ Ž ɄȪǅÊǟ ȴȶÊǫǟ ȥŁ ǼǞǼǅ ɃǞǞè ·ğǞǞǞØǟ ỉǞȮɳǟʂ ʒǞǫǕ ȸɳ ¢ǞʒǰǫǞǞɳʂ *ǦȪ̀ỉȥǟ ǦǰÛȶǞ* ȪǞÛȲǟ ʔȲʒ ǞǻǞȶǫʒǟ (IV БǕ I) ǦǞǫǺȶǟ ğǞʒȥȶȬǟ ȧǞǞǨ ·ǞǼǅ ǞǞȣɳ *ǦȪ̀ỉȥǟ ǦǰÛȶǟ* ţȥǫ ǞȮÊȲǟ ǦǞǵʂ ƙǨʂƎȲǟ ǦǞǵ I ǦʒȥȶȬǟ ·ǞõǞȮÊǟ ȴǞÛƠʂ ğǞǞǨʂƎǟ ȴȒŁ ʔȲʒ ǞőøǼȪɳ

... (9 ...28) ...

... (7) ...

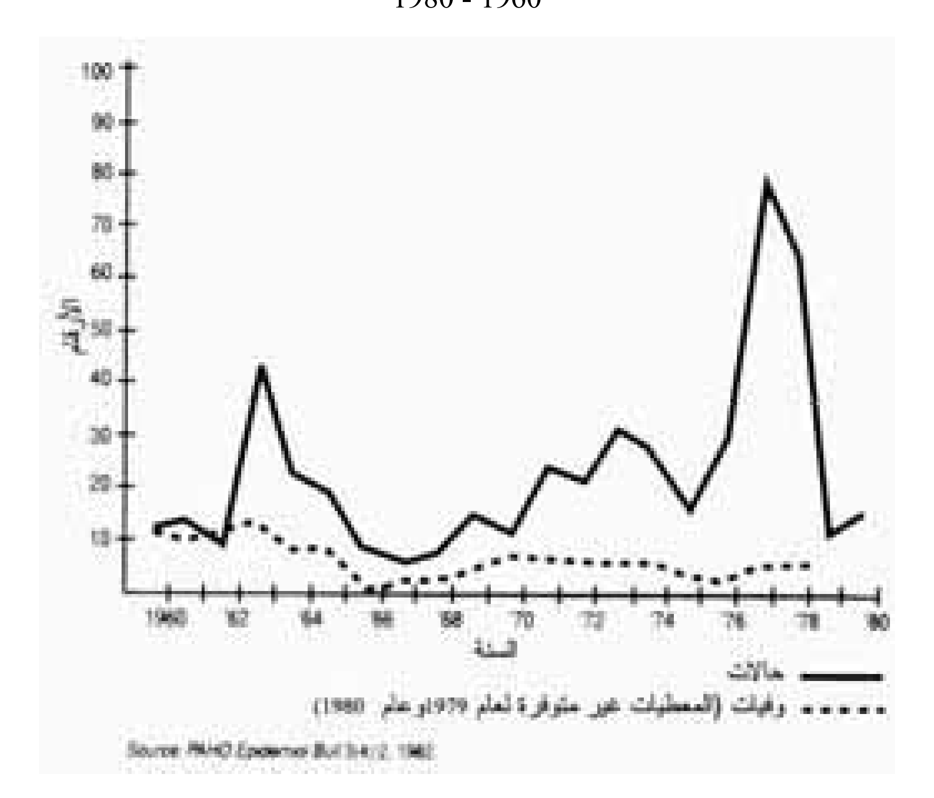
.baratii ... butyricum ...

... (2) ... (15) ... (36) ...

... (37) ... (14) ...

.argentinense ... (1986) ...

1980 - 1960



100
90
80
70
60
50
40
30
20
10
1960
62
64
66
68
70
72
74
76
78
80
السنة
حالات

Source: PAHO Epidemiol Bull 3(4):2, 1982.

(ā)(ǭ) 1977 – 1899 ǥÆHʊţä ğÀɼʐöä – ğÀĒÌÀÀöä åÆʒʂ ÛƟÕDzÊöä ǈtÊǬŸö ǦǦÊţä ǦtȞùɉä :1 ȯʂÆƨä

نمط ذيفان التسمم السجقي	الخضار	السمك ومنتجاته	الفواكه	التوابل(ج)	العجل(د)	اللبن ومنتجاته	الخنزير	الطيور	أخرى(هـ)	غير معروف	الإجمالي
A	115	11	22	17	6	3	2	2	8	9	195
B	31	4	7	5	1	2	1	2	3	3	59
E	1	25	—	—	—	—	—	—	3	1	30
F	—	—	—	—	1	—	—	—	—	—	1
A, B	2	—	—	—	—	—	—	—	—	—	2
غير معروف	2	1	—	1	—	—	—	—	—	6	10
الإجمالي	151	41	29	23	8	5	3	4	14	19	297

أ) في الفترة من 1899 - 1973: ذكرت الفاشيات التي تم فيها توكيد نمط الذيفان فقط. أما في 1974- 1977فقد ذكرت كل الفاشيات.

ب) محضر من قبل مراكز مكافحة الأمراض والوقاية منها بأتلانتا، جورجيا، الولايات المتحدة.

ج) تتضمن الفاشيات الناجمة من توابل الطماطم والسلطات والنقانق الحارة.

د) تتضمن فاشية من النمط F ناجمة عن لحم الغزال وفاشية نمط A من لحم الضأن.

هـ) فئات أضيفت للفترة 1974- 1977

Source: PAHO Epidemiol Bull 3(4):2, 1982.

ʔŸʒ ƙȦǕǪ ǂǟ ȷÂǺƫǟ ǪȮǛǟş ƵŸȞǛ ǬǬǛ ȸʒ ƟÊǼǝø ǬȮÎǝ ǦƤȦǴ ğ ɍȦǵş ǦȦǻǟȀǕ ğȦǼǐȦǕ
ǪȮǛ ǬŸȚǪèǟ ǦDzǼǪǴ ǦȽȚŋ ğȦǼǐȦǕ ǥǼʒ ǼǛȦǵ ǨŸDzè ·(31) ȷǕȮǪǛ ǦǬǦÊƫǟ ğȦǴȦȀØǛ
ǦǼǐȦŋ âǕø 150 ȸŋ 80 ǴǦòǕ ʔȽȚȞǛ ȦǼǴȦÛȀȦǝ Ž ·øǕǼÛǛ ǫşøş ğȦǴǟǕǼȞŸǞ ǼǐǟȀǕ ØǺǪƫǟ
ǼŸÔŋ 22 ȸŋ 18 Ž C ȔȽȀǛ ȷȦȀǝ ƵÎǪǬǟ ·ȦȚȀŋ 68 ğȦŋş ǼȒȀȀŋ ǬǦÛò ɍǟ Ž ǥǻǕDzǕŋ
·(22) ȷÂǺƫǟ ǪȮǛ Ž ǻǕDzǕƫǟ ǨǼƫǟ ʓȦDzǼǛ ȦȀǬǝ Ž ȷȦȀØǛ ȄȀǴ ğȦǦǪǕ Ź Ǽęş ·ǨÔȞǕ
ǦȀØ8Ǫǝ ǦŋǼǺǪÊƫǟ øǕǼÛǛ ȇǟȀǕ ǒǟǕǪǵǟ ǦDzǼǪǴ ǟǼȀǬş ǬȀǟǟƎǛ Ž ǦǒȦÎŋ ğȦǼǐȦǕ ǨǪǼǵ
·(29 Ǖ4) C ȔȽȀǛ ȷȦȀǝ ʔŸʒ ǦǼǐȦƫǟ

·ǦǼǐȦƫǟ Ž ƟǾǼ ǐ ǕǛ ȴȽÊǪǛ ğȦǼǐȦǕ ǫǼƠ ȦŋǼȀʒ ǥǻȦʒ ǥǻǕDzǕŋ ǦǼǴǟǕǼΣǟ ğȦȀŸǺƫǟ
ǼȀǼȞǛ Ž ƵŸȞǛ Ž ǦǼǴǟǕǼǵ ğȦȀŸƯ ɃǕ ǼDzǕǨ ɍ Ǽę ·ǬǬ ʔŸʒşÛȷÂǺƫǟ ǪȮǛ ǦDzǼǪǴ ǦòȦǹ
·ǦǝøşǕş ǥǼȞǕǪƫǟ ğȦȀɍǕǛ Ž ğ ɍȦΣǟ ȸŋ

(11) ǥǼȞǕǪƫǟ ğȦȀɍǕǟş (5) ȦǝøşǕ Ž ğȦǼǐȦǕ ǨǪǼǵ ·øǻȦǴ B ȔȽȀǛȦǝ ȀǬǦǛ ȴȽÊǨ
āȀȡ Ž ȣȀȞǪèǟ Ǽęş C ȔȽȀǛ ȸʒ ÿȦȀȡɉǟ Ž ƟǾǼ ǐ ǕǛ ȴȽÊǪǛ ȴDzȀȀ ·(20) ǬȀǟǟƎǛş
·ȔǬǕ ǼǬȀȀǕǕ āǕȀDzş ǼǛǟȀǪèǟ

ȸŋ *ǦǼǾǼ ǐ ǕǛ ǦǼǕÛƫǟ* ȸʒ ȦȚȽȚȞŋ ȴDzȀȀş ǦȀǻǟȀǕ ƟǾǼ ǐ ǕǛ ȴȽÊǪǛ ğ ɍȦȞǕ ȯǕǼȷǟ Ž ȦŋǕ
ƙÛÊŸǕş ǥǼȞǕǪƫǟ ğȦȀɍǕǟş ǦǼǝøşɉǟ ȷǟǼŸǦǛ ȸŋ ǼȀǼȞǛ Ž ǨÔǺǐ Ǽęş ·C ȔȽȀǛ
ǦŋǟŸǪŋ) ʒǼǝȦèǕ 8-6 ȀȽȞǝ øǕȚƫǟ Ž î ȦǹƫǕǴ ǫǼʒ ·ǼǬȀȀǕǕ āǕȀDzş ǼǛǟȀǪèǕş (ǬǼǝǟȀèǕ)
Ž ƟǾǼ ǐ ǕǛ ȴȽÊǪǞ ǦǒȦÎŋ ȼǪǼ ɼǟȀŋǕ ǕB ȔȽȀǞ ƟøǦÔȞǛ ȷȦȀØǛ ȸʒ ȴDzȀȀş (ǟǟÂȚǟ ȀȚƫǟ
ȷȦȀØǛ ǰǪȀǪǝ ǼɍşǕ ʡȀǹɉǟ ʒǟǕƫǟş ǒȦȞŋɉǟ *ǦǼǾǼ ǐ ǕǛ ǦǼǕÛƫǟ* ȀȽȞǪÊǨ ǬǼǵ ÛȯȦȀùɉǟ
·(40) ǼǛǟȀǪèǕş ǥǼȞǕǪƫǟ ğȦȀɍǕǛ Ž ǬȮÎǛ ǟØȽ ȸŋ ğȦǼǐȦŋ ǨȦòş ·ǼǬǵɍ ƟøǦÔȞǛ
ȷȦȀØǝ ƫǕȀǛ ǟØȚ ǦǼǬȦȞǛ ǦǼȞǼǦÛǛ ǦŋşȦǬƫǟ ǼǦÊǝ øǻȦǴ ȀȀǟȀȂǟ Ž ƟǾǼ ǐ ǕǛ ȴȽÊǪǛ
ǥǼǵǟş ǨȽƱş ȦǪǼǝ C ȔȽȀǛ ȸŋ ǼǛǟȀǪèǕş ȯȦ8ȀÊǛ Ž ǨÔǺǐ ğȦǼǐȦǕ ǨȽƱ ·ǦǼǾǼ ǐ ǕǛ
·B ȔȽȀǛ ȸʒ ǥǼȞǕǪƫǟ ğȦȀɍǕǛ Ž

ǦƤȦǴ ǦȽȚŋ ǦŸȮÎŋ (ğȦȀøǕȀÊǛ ȸŋ ôøȦę ȷǟǕǼǵ) ǬȀƫǟ Ž ƟǾǼ ǐ ǕǛ ȴȽÊǪǛ ȷǕȮȀ Ǽę
ǦǝȦòȒǞ ǦǼǬȦʒ ǦDzøǼǝ ǼȞǪÊŋ ǬȀƫǟ ·ȼǝ ʔòǕŋ ǕȽ ȦȽǬ ǴǬŸȀ Ƀ ǟǼǕ ǬǬɉǟ Ž ȼǨǟǻȦʒ ȸʒ
·ǼǦȀȀǬǨ ğȦǼǐȦȀǛ ǬǬ ǼǦÊȀ ɃøǛ C ȔȽȀǛȦǝ

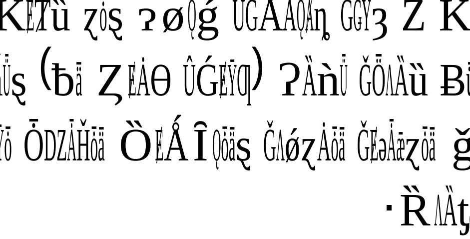
[illegible] 1977-1970 [illegible] %15.7 [illegible] 1949 – 1899 [illegible] %60 [illegible] 8-6

A) [illegible] (E [illegible] B [illegible] (3) [illegible]

[illegible] 96 [illegible] 41 [illegible] (23) [illegible] A [illegible] F [illegible] B [illegible] 53 [illegible] B [illegible] *botulinum* [illegible] E [illegible] F [illegible] 6 [illegible] C [illegible] (24) [illegible] C [illegible] (34) [illegible]

.(Swerczek, 1980)

260 %23.5 4 (32)



Arnon, S.S. Infant botulism: Anticipating the second decade. *J Infect Dis* 154:201–206, 1986.

Aureli, P.L., F.B. Pasolini, M. Gianfranceschi, *et al.* Two cases of type E infant botulism caused by neurotoxigenic *Clostridium butyricum* in Italy. *J Infect Dis* 154:207–211, 1986.

Benenson, A.S., ed. *Control of Communicable Diseases in Man.* 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bienvenue, J.G., M. Morin, S. Forget. Poultry litter associated botulism (type C) in cattle. *Can Vet J* 31:711, 1990.

Blood, D.C., O.M. Radostits, J.A. Henderson. *Veterinary Medicine.* 6th ed. London: Baillière Tindall; 1983.

Castro, A.G.M., A.M. Carvalho, L. Baldassi, *et al.* Botulismo em aves de postura no estado de São Paulo. *Arq Inst Biol* 55:1–4, 1988.

Cato, E.P., W.L. George, S.N. Finegold. Clostridium. *In:* Sneath, P.H.A., N.S. Mair, M.E. Sharpe, J.G. Holt, eds. *Bergey's Manual of Systemic Bacteriology.* Vol 2. Baltimore: Williams & Wilkins; 1986.

Ciccarelli, A.S., D.F. Giménez. Clinical and epidemiological aspects of botulism in Argentina. *In:* Lewis, G.E., Jr., ed. *Biomedical Aspects of Botulism.* New York: Academic Press; 1981.

Concon, J.M. Part B: Contaminants and additives. *In: Food Toxicology.* New York: Marcel Dekker; 1988.

Dezfulian, M., C.L. Hatheway, R.H. Yolken, J.G. Bartlett. Enzyme-linked immunosorbent assay for detection of *Clostridium botulinum* type A and type B toxins in stool samples of infants with botulism. *J Clin Microbiol* 20:379–383, 1984.

Divers, T.J., R.C. Bartholomew, J.B. Messick, *et al. Clostridium botulinum* type B toxicosis in a herd of cattle and a group of mules. *J Am Vet Med Assoc* 188:382–386, 1986.

Giménez, D.F., A.S. Ciccarelli. Another type of *Clostridium botulinum*. *Zentralbl Bakteriol* 215:221–224, 1970.

Giménez, D.F., A.S. Ciccarelli. *Clostridium botulinum* en Argentina: presente y futuro. *Rev Asoc Argent Microbiol* 8:82–91, 1976.

Giménez, J.A., M.A. Giménez, B.R. Dasgupta. Characterization of the neurotoxin from a *Clostridium baratii* strain implicated in infant botulism. *Infect Immun* 60:518–522, 1992.

Hall, J.D., L.M. McCroskey, B.J. Pincomb, C.L. Hatheway. Isolation of an organism resembling *Clostridium barati* which produces type F botulinal toxin from an infant with botulism. *J Clin Microbiol* 21(4):654–655, 1985.

Hatheway, C.L., L.M. McCroskey. Laboratory investigation of human and animal botulism. *In*: Lewis, G.E., Jr., ed. *Biomedical Aspects of Botulism*. New York: Academic Press; 1981.

Hauschild, A.H. *Clostridium botulinum*. *In*: Doyle, M.P., ed. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Ingram, M., T.A. Roberts. *Botulism 1966*. London: Chapman & Hall; 1967.

Kravchenko, A.T., L.M. Shishulina. Distribution of *C. botulinum* in soil and water in the USSR. *In*: Ingram, M., T.A. Roberts, eds. *Botulism 1966*. London: Chapman & Hall; 1967.

Lobato, F.C.F., M.A. de Melo, N. de Silva, J.M. Diniz. Botulismo em bovinos causado pelo *Clostridium botulinum* tipo B [letter]. *Arq Brasil Med Vet Zootec* 40:445–446, 1988.

MacDonald, K.L., M.L. Cohen, P.A. Blake. The changing epidemiology of adult botulism in the United States. *Am J Epidemiol* 124:794–799, 1986.

McLoughlin, M.F., S.G. McIlroy, S.D. Neill. A major outbreak of botulism in cattle being fed ensiled poultry litter. *Vet Rec* 122:579–581, 1988.

Morris, J.G., J.D. Snyder, R. Wilson, R.A. Feldman. Infant botulism in the United States: An epidemiological study of cases occurring outside of California. *Am J Public Health* 73:1385–1388, 1983.

Oguma, K., K. Yokota, S. Hyashi, *et al.* Infant botulism due to *Clostridium botulinum* type C toxin. *Lancet* 336:1449–1450, 1990.

Pan American Health Organization (PAHO). Botulism in the Americas. *Epidemiol Bull* 3(4):1–3, 1982.

Prévot, A.R., A. Turpin, P. Kaiser. *Les bactéries anaérobies*. Paris: Dunod; 1967.

Riemann, H. Botulism: Types A, B, and F. *In*: Riemann, H., ed. *Food-borne Infections and Intoxications*. New York: Academic Press; 1969.

Sakaguchi, G., I. Ohishi, S. Kozaki. Purification and oral toxicities of *Clostridium botulinum* progenitor toxins. *In*: Lewis, G.E., Jr., ed. *Biomedical Aspects of Botulism*. New York: Academic Press; 1981.

Schocken-Iturrino, R.P., F.A. Avila, S.C.P. Berchielli, *et al.* Cama de frango contaminada con toxina botulínica. *Ciencia Vet Jaboticabal* 4:11–12, 1990.

Smith, L.D. Clostridial diseases of animals. *Adv Vet Sci* 3:463–524, 1957.

Smith, L.D. *Botulism: The Organism, its Toxins, the Disease*. Springfield: Thomas; 1977.

Smith, L.D. The occurrence of *Clostridium botulinum* and *Clostridium tetani* in the soil of the United States. *Health Lab Sci* 15:74–80, 1978.

Sonnabend, O., W. Sonnabend, R. Heinzle, T. Sigrist, R. Dirnohofer, U. Krech. Isolation of *Clostridium botulinum* type G and identification of type G botulinal toxin in humans: Report of five sudden unexpected deaths. *J Infect Dis* 143:22–27, 1981.

Sonnabend, O.A., W.F. Sonnabend, U. Krech, *et al.* Continuous microbiological and patho-

logical study on 70 sudden and unexpected infant deaths: Toxigenic intestinal *Clostridium botulinum* infection in 9 cases of sudden infant death syndrome. *Lancet* 2:237–241, 1985.

Spika, J.S., N. Schaffer, N. Hargrett-Bean, *et al.* Risk factors for infant botulism in the United States. *Am J Dis Child* 143:828–832, 1989.

Suen, J.C., C.L. Hatheway, A.G. Steigerwalt, D.J. Brenner. Genetic confirmation of identities of neurotoxigenic *Clostridium baratii* and *Clostridium butyricum* implicated as agents of infant botulism. *J Clin Microbiol* 26:2191–2192, 1988a.

Suen, J.C., C.L. Hatheway, A.G. Steigerwalt, D.J. Brenner. *Clostridium argentinense* sp nov; a genetically homogenous group of all strains of *Clostridium botulinum* toxin type G and some nontoxigenic strains previously identified as *Clostridium subterminale* and *Clostridium hastiforme*. *Int J Syst Bacteriol* 38:375–381, 1988b.

Swerczek, T.W. Toxicoinfectious botulism in foals and adult horses. *J Am Vet Med Assoc* 176:217–220, 1980.

Terranova, W., J.G. Breman, R.P. Locey, S. Speck. Botulism type B: Epidemiologic aspects of an extensive outbreak. *Am J Epidemiol* 180:150–156, 1978.

Thomas, R.J., D.V. Rosenthal, R.J. Rogers. A *Clostridium botulinum* type B vaccine for prevention of shaker foal syndrome. *Aust Vet J* 65:78–80, 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). *Botulism in the United States 1899–1973. Handbook for Epidemiologists, Clinicians, and Laboratory Workers*. Atlanta: CDC; 1974.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Wound botulism associated with parenteral cocaine abuse. *MMWR Morb Mortal Wkly Rep* 31:87–88, 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). International outbreak of type E botulism associated with ungutted, salted whitefish. *MMWR Morb Mortal Wkly Rep* 36:812–813, 1987.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Outbreak of type E botulism associated with an uneviscerated, salt-cured fish product—New Jersey, 1992. *MMWR Morb Mortal Wkly Rep* 41:521–522, 1992.

Ying, S., C. Shuan. Botulism in China. *Rev Infec Dis* 8:984–990, 1986.

BRUCELLOSIS ɭ ǘĭƨǋþǦǁɛ ƅɛɋ

ƅɛɋ **A 23.1** ÛƕĭǗǁǇŽǁɛ ƕŧĭƨǋþǦǁɛ ǅźY !ɯƑǆǁɛ ɭ ǘĭƨǋþǦǁɛ ƅɛɋ **ICD-10 A23.0**

!ɯƑǆǁɛ ɭ ǘĭƨǋþǦǁɛ ƅɛɋ **A 23.2** Ûƕ ƮǋɯɯǅŽǁɛ ƕŧĭƨǋþǦǁɛ ǅźY !ɯƑǆǁɛ ɭ ǘĭƨǋþǦǁɛ

ƕĭǦŧ/ǁɛ ƕŧĭƨǋþǦǁɛ ǅźY !ɯƑǆǁɛ ɭ ǘĭƨǋþǦǁɛ ƅɛɋ **A 23.3** ÛƕĭþĭŘǆǬǁɛ ƕŧĭƨǋþǦǁɛ ǅźY

ICD-10A23.0 brucellosis due to *Brucella melitensis*; A23.1 brucellosis due to *Brucella abortus*; A23.2 brucellosis due to *Brucella suis*; A23.3 brucellosis due to *Brucella canis*

ÛĞŁÛōÅţä ɂȶΣä ÛĞǅǮȶǬţä ɂȶΣä ÛMelitococcosis ĞĔÊĦöä ğäǿɀȮţä ǒäǻ ˑğÅɀǻäÅţä

Contagious epizootic infectious

neotomae

biovars (3-1) M 7 (7-1) (5-1) 9 7

Dyes CO_2 H_2S (57)

(11 22 32)

(1985) biogroups

[illegible] (Neotoma lepida [illegible]) [illegible]

[illegible] (1975 [illegible]) [illegible]

[illegible] 7,893 [illegible] (100000 [illegible] 74) 1987 [illegible] 8 [illegible] 1987 – 1979 [illegible] 250000 [illegible] 1988 [illegible] (100000 [illegible] 13) [illegible] 71.051 [illegible] 6) [illegible] 5003 [illegible] 1989 [illegible] 80000 [illegible] 3) 1989 – 1986 [illegible] 1990 [illegible] (100000 [illegible] .(100000 [illegible]

[illegible]

[illegible] 1947 [illegible] 6321 [illegible] .(CDC, 1982) 1981 – 1972 [illegible] 224 [illegible] 1939 [illegible] 1931 [illegible] 500 [illegible] 1962 [illegible] .1964 [illegible] 3041 [illegible] 1988 [illegible] 4683 [illegible] .Rev 1 [illegible] .1990 [illegible]

[illegible] .(46 [illegible] 84) [illegible] .(40) [illegible] .(40) [illegible] (Monograph [illegible]

[illegible] 600 [illegible]

[illegible] (50) [illegible] 1954 [illegible]

hares [illegible] (lepus europaeusi) [illegible]

[illegible] (84) [illegible]

[illegible]

[illegible] %25 [illegible] %20 [illegible] estrus [illegible]

[illegible]

[illegible] hygromas [illegible]

[illegible]

[illegible] (40) [illegible]

[illegible]

epizootiology

Reactors

%25 %10

(*Lepus eurpoaeus*)

[illegible] (52) [illegible] (73) [illegible] anestrus [illegible]

ȸȮɀş ·Ấŋɀʌ 150 ȸŋ Ǯǯõǚ ğɍȦΣä ȒĦǣ Ž ɁşǼȞöä ȳşǼǩ Ǽę ·ģǿåȦφ ǼŸõ БǕ ǼŸõ ĞŁŸĞƬţä ȦőöäȦȦŋş ȦȽäȦǣş ȦƬɀǣ Ž ğŸľèşƎöä ǳȦÛǩ ȷǕ ¯ ǿåȦφ Ȭöǣ ȷǕ ȴȡǿ ¯ āŸȮŸõ ŏäá ȦƬŁɀ ĞŁìȦȶŸõ ğȦȮŸǪư 10 ȸŋ ȂĞŸõ 14 äǼȦõ Ž ǨȦȦǱǕ Ğèäǿá ǨȞƤ ·ĞȒƬŎä ĞȦǱɟäş ǼŸõ Ž ĞφȦǯţä ȸŋş ȬĞƬţä ĞŁüȦƯ ȸŋ ĞŁǣȦƶǕ ţşǿà ɁŸɜ ȯɀȎΣä Ź ·ɃȦȫĞöä ğŸľèşƎöä ȸŋ Ấŋɀʌ 464 ǼȞǣ ĞŁŸĞƬţä ğääȦɀqä ȸŋ ģǨǹɟä ĞŁǣȦƶqä ĞȦŁȞöä ɁŸɜ ȯɀȎΣä Ź Ǽęş ·Ǽģäş ȸŋ ɁȦǹɟä āŸȮöä ȸŋ ğŸľèşƎöä ğåȦǪëä ·ɁşǼȞöȦǣ ǼŸȮöä ĞǣȦòq ȬȶǪǂä ǸȦǿȦǪöä ɁşǼȞöä ǿǼȎŋ ȷȦõ ĞȦȊǣ ğɍȦģ ģǼɜ ǨȦòş ·(35) (ĞǣĞöä) ȜŁǂä БǕ ǳȂǿȦǩ ɍ ŏȦȒɜǕ ·(ĞȦǱɟä ĞòȦǹ) āŸȮöä ɀȽ ȦƬŁɀ

= ȣäɀȆöä) ĞŁɀäɀè ȌəȦȎǹ БǕ ȬȎȦ Ǽę ɃǾöäş ȂţȦɜ ɋǼʒ ɃǾöä ɄǿĞŸȮöä ȏȦţä ğŸľèşƎöä ŏäá ȸŋ ȬȮȊöä äǾȽ ȂŁȶǪȦ ·*ĞŁĞŸȮöä ĞƗľèşƎöä* ȸɜ ȴǱȦȦöä ɀȽ (ƆäɀŁΣä ŏȦǣɀöä Ǹǣ Ǝöä āȦƬǪöäş ĞǩȦǪèşƎöä āȦƬǪöäş ğȦȓȦƬǱǕş ƙȦɿä ğɀŋ ɜŋ ɁƥȷşáȳǼŸõ ǼȦǼŋ ŻȦǱɀǪǣ ȳɀŁöä ȯɀģ ȏȦƬǱqä ɋǼʒ ·ȯȦȞɄÛöä āȦƬǪöäş ĞŁȦȶŸöä ǼȬȞöä āȦƬǪöäş ȸȦȎöä ǼŸǱ āȦƬǪöäş ɁȬĞȦ ȸŋ ǼȦɜ ǼǱɀʌ ·ȳȦǖǣ ģåɍɀöä ǼȞǣ ğɀǪ şǕ ÛȬȶΣä ȳȦȶǪǣ ŏäȦɿä ȌŸǪ Ǽę ·ȬȶΣä ȸŋ 50 ·ȳǼöä ŻȦΘ ǼǱɀʌ Ȧŋ ȂĞöȦȡş ÛģåȦɜ ĞŁȦȶŸöä ǼȬȞöä ĞŋȦǺ ȓ Ȃģ

ÛȂȦǼȞȦŋ ȂĞŸõ 18 ǿō ĞŁĞȦΘ ĞɿȦȞŋ Ž (Ȃŋɀʌ ƙǩȦŋ ŋõ/ŋŋ 27.5) ƙŸȮŁèɀȂţä ɄÛɜǕ ǼȞǣ 28 ţɀĞèɟäş 6 ţɀĞèɟä ƙǣ ɃȦǱǕ ɃǾöä Ǭǯɿä ȌȞɀ Ž ĞŁǣȦƶǕ ţşǿà ȦƬȦŋ 15 ǼȦɜ ·(WHO 1986) ĞɿȦȞţä ĞȦȦŒ

ğǼõɀǩ ·ĞȦǼŁŸȫǪöä ğŸľèşƎöä ȸŋ Ȭęǚ ĞǱǿǼǣ ȸȮō *ĞŁĞŸȮöä ĞƗľèşƎŸō* ǼȞǪȆŋ ȷȦȆφqä Ž ƙŸŋȦȞöäş ƎǪȦţä Ž ƙǪȦǱǿɟäş ȬȦääƎöäş ȬŁȆȮţäş ģǼȞɄǪţä ğȦȦɍɀöä Ž ğɍȦģ ģǼɜ ·ĞȦǼȞȦŋ āŸõ ɜŋ ğŸəȦɜ ȸŋ ŏȦȒɜǕ БǕ ĞɀȦȓqȦǣ Û āŸȮöä ǿȦǱş ·ɄȞĞÛöä ȏȦţä ȸŋ ğɍȦģ ɋǼƠ Ɓ ȬōǿŌ ä Ûğ *ŸľèşƎŸō* ĞŋşȦȫŋ ȜÛȫöä

âɀŋȦɿä Ž *ĞȒƬŎä ĞƗľèşƎöä* ȸɜ ȴǱȦȦöä ğŸľèşƎöä ŏäá ɋǼʒ ˸ɁȦǹǕ ĞȦǱäá ğȦŁȦǼǫ ɜŋ (*Bos grunniens*) (ȴȦȒöä ǨĞŁǪöä ǿɀǭ) Yak ŏȦȫȊ ȵäş (*Bubalus bubalis*) *ȸǱäǼöä ȬȶɿȦ*) ƇǼȫöä ƁȦȞöä ȯȦƤ Ž ȏȦţä ǼȽɀì Ȧȶõ ·ĞŁìȦţä Ž ģåɀǱɀţä ȬŸǭ ĞŏȦȊŋ ȏäȦɜǕ

Camelus bactriianus

(Camelus dromedarios

·(2)

1

(Lama pacos)

alpaca

·(1)

3

·(

·5

(Lepus europaeus)

2

4

Galictis) Grisons (82) (Dusicyon gymnocerus D. griseus)

1 (furax huronax

(Lepus europaeus)

(Didelphis azarae) (83) 1

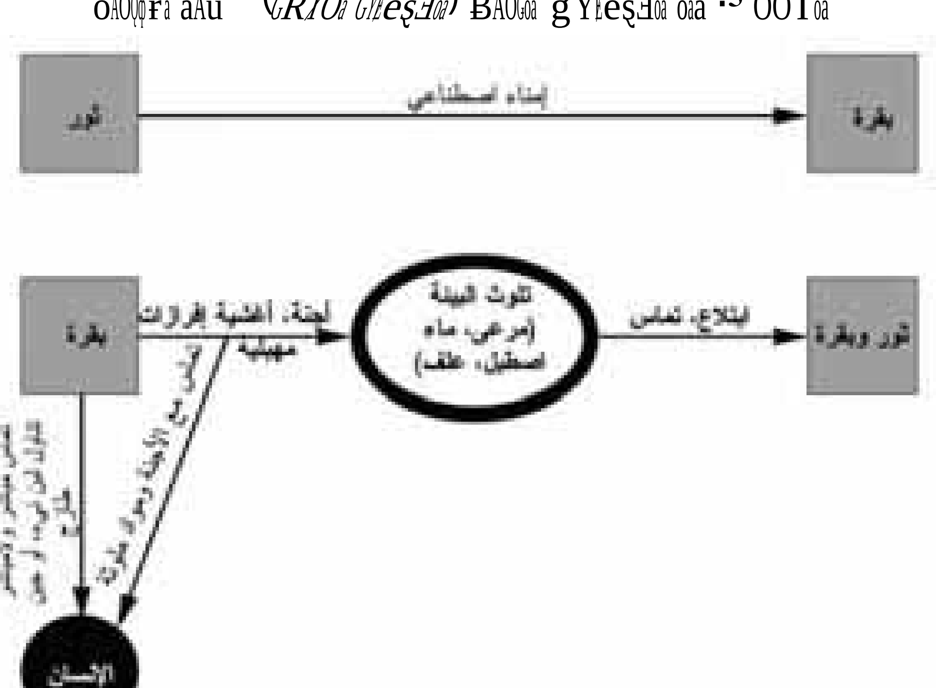
·(25) 1 1

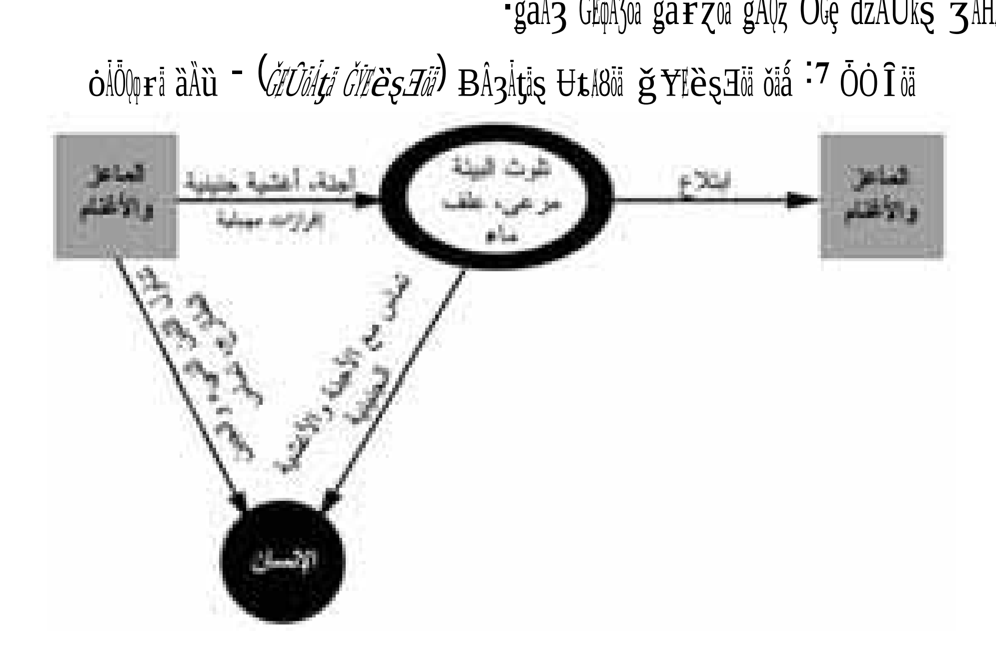
[illegible] (*Bison bison*) [illegible]

[illegible] coxal [illegible] 8 [illegible] 20000 [illegible] (67) [illegible]

[illegible] (*Tripanscorax* [illegible] (*Corvus corvix*) [illegible] 8 [illegible] *fragilecus*).

[illegible]


ثور
إنشاء اصطناعي
بقرة
بقرة
لعقة، أغشية، إفرازات مهبلية
تلوث البيئة (مرعى، ماء، اصطبل، علف)
ابتلاع، تماس
ثور وبقرة
الإنسان



[illegible]

(49)

%0.5

2 2

1982

sonicated

6

(M-)

2

(18)

[illegible] (28) 19BA [illegible] 104 M [illegible]

[illegible] 19 [illegible] (8 - 3 [illegible]) [illegible] %80 [illegible] %65 [illegible] %90 [illegible] %70 [illegible] 6 [illegible] 8 [illegible] 10 - 7 [illegible]

[illegible] Reactors [illegible] 19 [illegible]

Uøɯɛþøǅǁɛ

Acosta, M., H. Ludueña, D. Barreto, M. Moro. Brucellosis en alpacas. *Rev Invest Pec* 1:37–49, 1972.

Al-Khalaf, S., A. El-Khaladi. Brucellosis in camels in Kuwait. *Com Immun Microbiol Infect Dis* 12:1–4, 1989.

Alton, G.G. The epidemiology of *Brucella melitensis* infection in sheep and goats. *In*: Verger, J.M., M. Plommet, eds. *Brucella melitensis*. Seminar held in Brussels, 14–15 November 1984. Dordrecht: Martinus Nijhoff; 1985.

Alton, G.G. Control of *Brucella melitensis* infection in sheep and goats—A review. *Trop Anim Health Prod* 19:65–74, 1987.

Alton, G.G., L.A. Corner, P.P. Plackett. Vaccination of pregnant cows with low doses of *Brucella abortus* strain 19 vaccine. *Aust Vet J* 56:369–372, 1980.

Alton, G.G., L.A. Corner, P.P. Plackett. Vaccination of cattle against brucellosis. Reduced doses of strain 19 compared with one and two doses of 45/20 vaccine. *Aust Vet J* 60:175–177, 1983.

Alton, G.G., L.M. Jones, C. García-Carrillo, A. Trenchi. *Brucella melitensis* Rev. 1 and *Brucella abortus* 45/20 vaccines in goats: Immunity. *Am J Vet Res* 33:1747–1751, 1972.

Alton, G.G., L.M. Jones, D.E. Pietz. *Laboratory techniques in brucellosis*. 2nd ed. Geneva: World Health Organization; 1975. (Monographs Series 55).

Anczykowski, F. Further studies on fowl brucellosis. II. Laboratory experiments. *Pol Arch Wet* 16:271–292, 1973.

Angus, R.D., C.E. Barton. The production and evaluation of a buffered plate antigen for use in a presumptive test for brucellosis. *In*: *Third International Symposium on Brucellosis, Algiers, Algeria, 1983. Developments in Biological Standardization*. Basel: Karger; 1984.

Banai, M., I. Mayer, A. Cohen. Isolation, identification, and characterization in Israel of *Brucella melitensis* biovar 1 atypical strains susceptible to dyes and penicillin, indicating the evolution of a new variant. *J Clin Microbiol* 28:1057–1059, 1990.

Barg, L. Isolamento de *Brucella canis* em Minas Gerais, Brazil. Pesquisa de aglutininas em soros caninos e humanos [thesis]. Belo Horizonte: Universidad Federal de Minas Gerais, 1975.

Barton, C.E., J.R. Lomme. Reduced-dose whole herd vaccination against brucellosis: A review of recent experience. *J Am Vet Med Assoc* 177:1218–1220, 1980.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Buchanan, T.M., L.C. Faber. 2-mercaptoethanol brucella agglutination test: Usefulness for predicting recovery from brucellosis. *J Clin Microbiol* 11:691–693, 1980.

Buchanan, T.M., S.L. Hendricks, C.M. Patton, R.A. Feldman. Brucellosis in the United States. An abattoir-associated disease. Part III. Epidemiology and evidence for acquired immunity. *Medicine* 53:427–439, 1974.

Cargill, C., K. Lee, I. Clarke. Use of an enzyme-linked immunosorbent assay in a bovine brucellosis eradication program. *Aust Vet J* 62:49–52, 1985.

Carmichael, L.E., J.C. Joubert. A rapid agglutination test for the serodiagnosis of *Brucella canis* infection that employs a variant (M–) organism as antigen. *Cornell Vet* 77:3–12, 1987.

Chappel, R.J., D.J. McNaught, J.A. Bourke, G.S. Allen. Comparison of the results of some serological tests for bovine brucellosis. *J Hyg* 80:365–371, 1978.

Chile, Ministerio de Agricultura, Servicio Agrícola and Ganadero. *Brucellosis bovina, ovina and caprina. Diagnóstico, control, vacunación*. Paris: Office International des Epizooties; 1987. (Technical Series 6).

Corbel, M.J. The serological relationship between *Brucella* spp., *Yersinia enterocolitica* serotype IX and Salmonella serotypes of Kauffman-White group. *J Hyg* 75:151–171, 1975.

Corbel, M.J., F.A. Stuart, R.A. Brewer. Observations on serological cross-reactions between smooth *Brucella* species and organisms of other genera. *In: Third International Symposium on Brucellosis, Algiers, Algeria, 1983. Developments in Biological Standardization*. Basel: Karger; 1984.

Corbel, M.J., E.L. Thomas, C. García-Carrillo. Taxonomic studies on some atypical strains of *Brucella suis*. *Br Vet J* 140:34–43, 1984.

De Lord, V., S. Nieto, E. Sandoval *et al*. Brucellosis en caprinos: estudios serológicos and bacteriológicos en Venezuela. *Vet Trop* 12:27–37, 1987.

De la Vega, E., C. García-Carrillo, C. Arce. Infección natural por *Brucella* en comadrejas *Didelphis marsupialis* en la República Argentina. *Rev Med Vet* 60:283–286, 1979.

Díaz, R., E. Maravi-Poma, J.L. Fernández, S. García-Merlo, A. Rivero-Puente. Brucellosis: estudio de 222 casos. Parte IV: Diagnóstico de la brucellosis humana. *Rev Clin Esp* 166:107–110, 1982.

Díaz, R., I. Moriyon. Laboratory techniques in the diagnosis of human brucellosis. *In*: Young, E.J., M.J. Corbel, eds. *Brucellosis: Clinical and Laboratory Aspects*. Boca Raton: CRC Press; 1989.

Drannovskaia, E. Brucella and brucellosis in man and animals. Izmir, Turkey, 1990. *Turkish Microbiol Soc* 16:87–100, 1991.

Elberg, S.S. The Brucellae. *In*: Dubos, R.J., J.G. Hirsch, eds. *Bacterial and Mycotic Infections of Man*. 4th ed. Philadelphia and Montreal: Lippincott; 1965.

Elberg, S.S. Immunity to *Brucella* infection. *Medicine* 52:339–356, 1973.

Elberg, S.S. A guide to the diagnosis, treatment and prevention of human brucellosis. Geneva: World Health Organization; 1981. VPH/81.31 Rev.1. (Unpublished document).

Ewalt, D.R., L.B. Forbes. Atypical isolates of *Brucella abortus* from Canada and the United States characterized as dye sensitive with M antigen dominant. *J Clin Microbiol* 25:698–701, 1987.

Fensterbank, R. Congenital brucellosis in cattle. Geneva: World Health Organization; 1980. WHO/BRUC/80.352. (Unpublished document).

Flores-Castro, R., F. Suárez, C. Ramírez-Pfeiffer, L.E. Carmichael. Canine brucellosis: Bacteriological and serological investigation of naturally infected dogs in Mexico City. *J Clin Microbiol* 6:591–597, 1977.

Forbes, L.B. *Brucella abortus* infection in 14 farm dogs. *J Am Vet Med Assoc* 196: 911–916, 1990.

Fredickson, L.E., C.E. Barton. A serologic survey for canine brucellosis in a metropolitan area. *J Am Vet Med Assoc* 165:987–989, 1974.

García-Carrillo, C. Métodos para el diagnóstico de la brucellosis. *Gac Vet* 32:661–667, 1970.

García-Carrillo, C. *Programa de erradicación de la brucellosis en California*. Buenos Aires: Centro Panamericano de Zoonosis, 1975. (Scientific and Technical Monographs 9).

García-Carrillo, C., E.A. Coltorti. Ausencia de anticuerpos resistentes al 2-mercaptoetanol en tres pacientes de brucellosis. *Medicina* 39:611–613, 1979.

García-Carrillo, C., N.E. Lucero. *Brucellosis bovina*. Buenos Aires: Hemisferio Sur; 1993.

García-Carrillo, C., B. Szyfres, J. González Tomé. Tipificación de brucelas aisladas del hombre and los animales en Latin America. *Rev Latinoam Microbiol* 14:117–125, 1972.

George, L.W., L.E. Carmichael. A plate agglutination test for the rapid diagnosis of canine brucellosis. *Am J Vet Res* 35:905–909, 1974.

Gilman, H.L. Brucellosis. *In*: Gibbons, W.J., ed. *Diseases of Cattle, a text and reference work. The work of 54 authors*. Wheaton: American Veterinary Publication; 1963.

González Tomé, J.S., L.J. Villa, E. del Palacio, R. Gregoret. El test de Angus and Barton (BPA) como prueba tamiz en el diagnóstico de la brucellosis bovina. *Rev Med Vet* 70:34–36, 1989.

Hendricks, S.L., M.E. Meyer. Brucellosis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Kasyanov, A.N., R.G. Aslanyan. Epizootiology and clinical appearance of animal brucellosis. *In*: Lisenko, A., ed. *Zoonoses Control*. Moscow: VII Centre Projects; 1982.

Kaufmann, A.F., M.D. Fox, J.M. Boyce, D.C. Anderson, M.E. Potter, W.J. Martone, *et al*. Airborne spread of brucellosis. *Ann NY Acad Sci* 353:105–114, 1980.

Lapraik, R.D., D.D. Brown, H. Mann. Brucellosis. A study of five calves from reactor dams. *Vet Rec* 97:52–54, 1975.

Lee, K., C. Cargill, H. Atkinson. Evaluation of an enzyme-linked immunosorbent assay for the diagnosis of *Brucella ovis* infection in rams. *Aust Vet J* 62:91–93, 1985.

Lu, S-L., J-L. Zhang. Brucellosis in China. *In*: Young, E.J., M.J. Corbel, eds. *Brucellosis: Clinical and Laboratory Aspects*. Boca Raton: CRC Press; 1989.

Lubani, M., D. Sharda, I. Helin. Probable transmission of brucellosis from breast milk to a newborn. *Trop Geogr Med* 40:151–152, 1988.

Luchsinger, D.W., R.K. Anderson. Longitudinal studies of naturally acquired *Brucella abortus* infection in sheep. *Am J Vet Med Res* 40:1307–1312, 1979.

Manthei, C.A. Brucellosis as a cause of abortion today. *In*: Faulkner, L.C., ed. *Abortion Diseases of Livestock*. Springfield: Thomas; 1968.

Manthei, C.A. Brucellosis. *In*: Dunne, H.W., ed. *Diseases of Swine*. 3rd ed. Ames: Iowa State University Press; 1970.

McCaughey, W.J. Brucellosis in wildlife. *In*: Diarmid, A., ed. *Diseases in Free-living Wild Animals*. New York: Academic Press; 1969.

McCullough, N.B. Microbial and host factors in the pathogenesis of brucellosis. *In*: Mudd, S., ed. *Infectious Agents and Host Reactions*. Philadelphia: Saunders; 1970.

Meyer, M.E. Inter- and intra-strain variants in the *Genus Brucella*. *In*: *Third International Symposium on Brucellosis, Algiers, Algeria, 1983. Developments in Biological Standardization*. Basel: Karger; 1984.

Morgan, W.J.B. Brucella classification and regional distribution. *In*: *Third International Symposium on Brucellosis, Algiers, Algeria, 1983. Developments in Biological Standardization*. Basel: Karger; 1984.

Myers, D.M., L.M. Jones, V.M. Varela-Díaz. Studies of antigens for complement fixation and gel diffusion tests in the diagnosis of infections caused by *Brucella ovis* and other *Brucella*. *Appl Microbiol* 23:894–902, 1972.

Nicoletti, P. A preliminary report on the efficacy of adult cattle vaccination using strain 19 in selected dairy herds in Florida. *Proc Annu Meet US Livest Sanit Assoc* 80:91–106, 1976.

Nicoletti, P., L.M. Jones, D.T. Berman. Adult vaccination with standard and reduced doses of *Brucella abortus* strain 19 in a dairy herd infected with brucellosis. *J Am Vet Med Assoc* 173:1445–1449, 1978.

Nicoletti, P., F.W. Milward. Protection by oral administration of *Brucella abortus* strain 19 against an oral challenge exposure with a pathogenic strain of *Brucella*. *Am J Vet Res* 44:1641–1643, 1983.

Nielsen, K., J.W. Cherwonogrodzky, J.R. Duncan, D.R. Bundle. Enzyme-linked immunosorbent assay for differentiation of the antibody response of cattle naturally infected with *Brucella abortus* or vaccinated with strain 19. *Am J Vet Res* 50:5–9, 1989.

Ossola, A.L., B. Szyfres. Natural infection of sheep by *Brucella melitensis* in Argentina. *Am J Vet Res* 24:446–449, 1963.

Pacheco, G., M.T. De Mello. *Brucelose*. Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística; 1956.

Pan American Health Organization. Guía para la preparación and evaluación de proyectos de lucha contra la brucellosis bovina. Buenos Aires: Centro Panamericano de Zoonosis; 1972. (Technical Note 14).

Peres, J.N., A.M. Godoy, L. Barg, J.O. Costa. Isolamento de *Brucella canis* de carrapatos (*Rhipicephalus sanguineus*). *Arq Esc Vet UFMG* 33:51–55, 1981.

Pfischner, W.C.E., K.G. Ishak, E. Neptune, *et al.* Brucellosis in Egypt: A review of experience with 228 patients. *Am J Med* 22:915, 1957. Cited in: Young, E.J. Clinical manifestations of human brucellosis. *In*: Young, E.J., M.J. Corbel, eds. *Brucellosis: Clinical and Laboratory Aspects*. Boca Raton: CRC Press; 1989.

Plommet, M., R. Fensterbank. Vaccination against bovine brucellosis with a low dose of strain 19 administered by the conjunctival route. III.—Seriological response and immunity in the pregnant cow. *Ann Rech Vét* 7:9–23, 1976.

Plommet, M., R. Fensterbank, G. Renoux, J. Gestin, A. Philippon. Brucellose bovine expérimentale. XII. Persistance a l'age adulte de l'infection congénitale de la génisse. *Ann Rech Vét* 4:419–435, 1973.

Ramacciotti, F. *Brucelosis*. Córdoba, Argentina: Edición del Autor; 1971.

Ray, W.C., R.B. Brown, D.A. Stringfellow, *et al.* Bovine brucellosis: An investigation of latency in progeny of culture-positive cows. *J Am Vet Med Assoc* 192:182–185, 1988.

Robertson, F.J., J. Milne, C.L. Silver, H. Clark. Abortion associated with *Brucella abortus* (biovar 1) in the T.B. mare. *Vet Rec* 92:480–481, 1973.

Ruben, B., J.D. Band, P. Wong, J. Colville. Person-to-person transmission of *Brucella melitensis*. *Lancet* 337:14–15, 1991.

Schwabe, C.W. *Veterinary Medicine and Human Health*. 2nd ed. Baltimore: Williams & Wilkins; 1969.

Spink, W.W. *The Nature of Brucellosis*. Minneapolis: University of Minnesota Press; 1956.

Spink, W.W. Brucellosis (Undulant fever, Malta fever). *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Stemshorn, B.W., L.B. Forbes, M.D. Eaglesome, *et al.* A comparison of standard serological tests for the diagnosis of bovine brucellosis in Canada. *Can J Comp Med* 49:391–394, 1985.

Sutherland, S.S., R.J. Evans, J. Bathgate. Application of an enzyme-linked immunosorbent assay in the final stages of a bovine brucellosis eradication program. *Aust Vet J* 63:412–415, 1986.

Szyfres, B. La situación de la brucellosis en Latin America. *Bol Hig Epidemiol* 5:400–409, 1967.

Szyfres, B. Taxonomia del género *Brucella*. *Gac Vet* 33:28–40, 1971.

Szyfres, B., J. González Tomé. Natural *Brucella* infection in Argentine wild foxes. *Bull World Health Organ* 34:919–923, 1966.

Szyfres, B., J. González Tomé, T. Palacio Mendieta. Aislamiento de *Brucella suis* de la liebre europea (*Lepus europaeus*) en la Argentina. *Bol Oficina Sanit Panam* 65:441–445, 1968.

Timm, B.M. *Brucellosis. Distribution in Man, Domestic and Wild Animals*. Berlin: Springer; 1982.

Trap, D., R. Gaumont. Comparaison entre electrosynerèse et épreuves serologiques classiques dans le diagnostic de la brucellose ovine. *Ann Rech Vét* 13:33–39, 1982.

United States, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Annual summary 1981: Reported morbidity and mortality in the United States. *MMWR Morb Mort Wkly Rep* 30:14, 1982.

Van der Hoeden, J. Brucellosis. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Verger, J.M., F. Grimont, P.A.D. Grimont, M. Grayon. *Brucella*: a monospecific genus as shown by deoxyribonucleic acid hybridization. *Int J Syst Bacteriol* 35:292–295, 1985.

Viana, F.C., J.A. Silva, E.C. Moreira, L.G. Villela, J.G. Mendez, T.O. Dias. Vacinação contra brucelose bovina com dose reduzida (amostra B_{19}) por via conjuntival. *Arq Esc Vet UFMG* 34:279–287, 1982.

Wilesmith, J.W. The persistence of *Brucella abortus* infection in calves: A retrospective study of heavily infected herds. *Vet Rec* 103:149–153, 1978.

Witter, J.F., D.C. O'Meara. Brucellosis. *In*: Davis, J.W., L.H. Karstady, D.O. Trainer. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

World Health Organization (WHO). *Fifth Report on the World Health Situation, 1969–1972*. Geneva: WHO; 1975. (Official Records 225).

World Health Organization (WHO). *Joint FAO/WHO Expert Committee on Brucellosis. Sixth Report*. Geneva: WHO; 1986. (Technical Report Series 740).

Xin, X. Orally administrable brucellosis vaccine: *Brucella suis* strain 2 vaccine. *Vaccine* 4:212–216, 1986.

Young, E.J. Clinical manifestations of human brucellosis. *In*: Young, E.J., M.J. Corbel, eds. *Brucellosis: Clinical and Laboratory Aspects*. Boca Raton: CRC Press; 1989.

Zoha, S.J., L.E. Carmichael. Serological response of dogs to cell wall and internal antigens of *Brucella canis* (*B. canis*). *Vet Microbiol* 7:35–50, 1982.

CAMPYLOBACTERIOSIS [illegible]

ICD 10 A 04.5 campylobacter enteritis [illegible]

[illegible] Vibrio [illegible] Jenjuni [illegible] fetus [illegible] upsaliensis [illegible] Lurdis [illegible]

[illegible] (42) [illegible]

[illegible] 1977 [illegible]

Enteritis caused by *Campylobacter jejuni*

Vibrionic

60 (McMyne *et al.*, 1982, Penner and Hennessy, 1980)

90 1,405 (1985) (Lior, 1982) %96.1 %92.1

1981 (Skirrow, 1982) 10745 12496 %14 %5 (1990) %20 600000

(Skirrow, 1982)

%17 %5

%31 %8 (Prescott & Munroe, 1982)

(Skirrow, 1982)

(Benenson, 1990)

(Jones *et al.*, 1981) 3500

30

(Hutchinson *et al.*, 40

1985)

%90

%10 (Karmali and Skirrow, 1984)

(Rescott and Munroe, 1982)

[illegible] Beagles [illegible] 10 [illegible] 505 [illegible] (%11.6) 59 [illegible] (Fleming, 1983) [illegible] 122 [illegible] (%1.6) [illegible] 39 [illegible]

[illegible] 156 [illegible] 241 [illegible] %20 [illegible] %13 [illegible]

[illegible] Monkey [illegible]

[illegible] 3 [illegible]

[illegible] %100 [illegible] (Prescott and Munroe, 1982) (skirrow, 1982) [illegible] 94 [illegible] 83 [illegible] 46 [illegible] 38 [illegible] 600 [illegible] %70 [illegible] %20 [illegible] %50 [illegible] %35

20 … %100 … %2.5 … %30 … %0 … 186

الماشية، الأغنام الكلاب، القطط الشيبات الداجنة والبرية، الطيور

الطريق البرازي

تلوث البيئة الطريق

الطريق الفموي

الماشية، الأغنام الكلاب، القطط الشيبات الداجنة والبرية، الطيور

الإنسان

Coliform … °4 … 300 … %30 … 1800 … %5.1 … (Stern *et al.*, 1985).

[illegible] .(Griffith and Park 1990) [illegible]

[illegible] 3 [illegible] 104 (1988) [illegible]

[illegible] .(Mancinelli *et al*., 1987) [illegible]

[illegible] .(Flores – Salorio *et al* 1983) [illegible] 6 [illegible]

[illegible] %10 [illegible] %5 [illegible] °43 [illegible] %85 [illegible]

[illegible] 3/1 [illegible] (Hopkins *et al.*, 1984) [illegible]

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Burnens, A.P., J. Nicolet. Detection of *Campylobacter upsaliensis* in diarrheic dogs and cats, using a selective medium with cefoperazone. *Am J Vet Res* 53:48–51, 1992.

Fleming, M.P. Association of *Campylobacter jejuni* with enteritis in dogs and cats. *Vet Rec* 113:372–374, 1983.

Flores-Salorio, S.G., V. Vázquez-Alvarado, L. Moreno-Altamirano. *Campylobacter* como agente etiológico de diarrea en niños. *Bol Med Hosp Infant Mex* 40:315–319, 1983.

Fox, J.G., K.O. Maxwell, J.I. Ackerman. *Campylobacter jejuni* associated diarrhea in commercially reared beagles. *Lab Animal Sci* 34:151–155, 1984.

Grados, O., N. Bravo, R.E. Black, J.P. Butzler. Paediatric campylobacter diarrhoea from household exposure to live chickens in Lima, Peru. *Bull World Health Organ* 66:369–374, 1988.

Griffiths, P.L., R.W. Park. Campylobacters associated with human diarrhoeal disease. A review. *J Appl Bacteriol* 69:281–301, 1990.

Hopkins, R.S., R. Olmsted, G.R. Istre. Endemic *Campylobacter jejuni* infection in Colorado: Identified risk factors. *Am J Public Health* 74:249–250, 1984.

Hutchinson, D.N., F.J. Bolton, P.M. Hinchliffe, *et al.* Evidence of udder excretion of *Campylobacter jejuni* as the cause of milk-borne campylobacter outbreak. *J Hyg* 94:205–215, 1985.

Jones, P.H., A.T. Willis, D.A. Robinson, *et al.* *Campylobacter* enteritis associated with the consumption of free school milk. *J Hyg* 87:155–162, 1981.

Karmali, M.A., M.B. Skirrow. Taxonomy of the genus *Campylobacter*. *In*: Butzler, J.P., ed. *Campylobacter Infection in Man and Animals*. Boca Raton: CRC Press; 1984.

Lior, H., D.L. Woodward, J.A. Edgar, *et al*. Serotyping of *Campylobacter jejuni* by slide agglutination based on heat-labile antigenic factors. *J Clin Microbiol* 15:761–768, 1982.

Mancinelli, S., L. Palombi, F. Riccardi, M.C. Marazzi. Serological study of *Campylobacter jejuni* infection in slaughterhouse workers [letter]. *J Infect Dis* 156:856, 1987.

McMyne, P.M.S., J.L. Penner, R.G. Mathias, W.A. Black, J.N. Hennessy. Serotyping of *Campylobacter jejuni* isolated from sporadic cases and outbreaks in British Columbia. *J Clin Microbiol* 16:281–285, 1982.

Patton, C.M., T.J. Barrett, G.K. Morris. Comparison of the Penner and Lior methods for serotyping *Campylobacter* spp. *J Clin Microbiol* 22:558–565, 1985.

Penner, J.L., J.N. Hennessy. Passive hemagglutination technique for serotyping *Campylobacter fetus* subsp. *jejuni* on the basis of soluble heat-stable antigens. *J Clin Microbiol* 12:732–737, 1980.

Prescott, J.M., D.L. Munroe. *Campylobacter jejuni*. Enteritis in man and domestic animals. *J Am Vet Med Assoc* 181:1524–1530, 1982.

Sandstedt, K., J. Ursing. Description of *Campylobacter upsaliensis* sp.nov. previously known as CNW group. *System Appl Microbiol* 14:39–45, 1989.

Skirrow, M.B. *Campylobacter* enteritis. The first five years. *J Hyg* 89:175–184, 1982.

Stern, N.J., M.P. Hernández, L. Blakenship, *et al*. Prevalence and distribution of *Campylobacter jejuni* and *Campylobacter coli* in retail meats. *J Food Protect* 48:595–599, 1985.

[illegible] -2

Diseases caused by *Compylobacter fetus*

[illegible] Vibriosis [illegible]

[illegible] *fetus* [illegible] *Campylobater fetus* [illegible]

[illegible] *venerealis* [illegible]

[illegible] 42° [illegible] 25° [illegible]

[illegible]

[illegible] 1981 [illegible]

134 .(Bokkenheuser and Sutter, 1981)

(Veron and .Chatelain, 1973)

.45

%43 %27 .(Morrison *et al*., 1990)

%50

7 - 2

.(Bokkerheuser and Sutter, 1981)

pathogen

.(Havery α and Green Wood 1983, Devlin and McInyre, 1983)

.(Morrison *et al*., 1990)

estrus

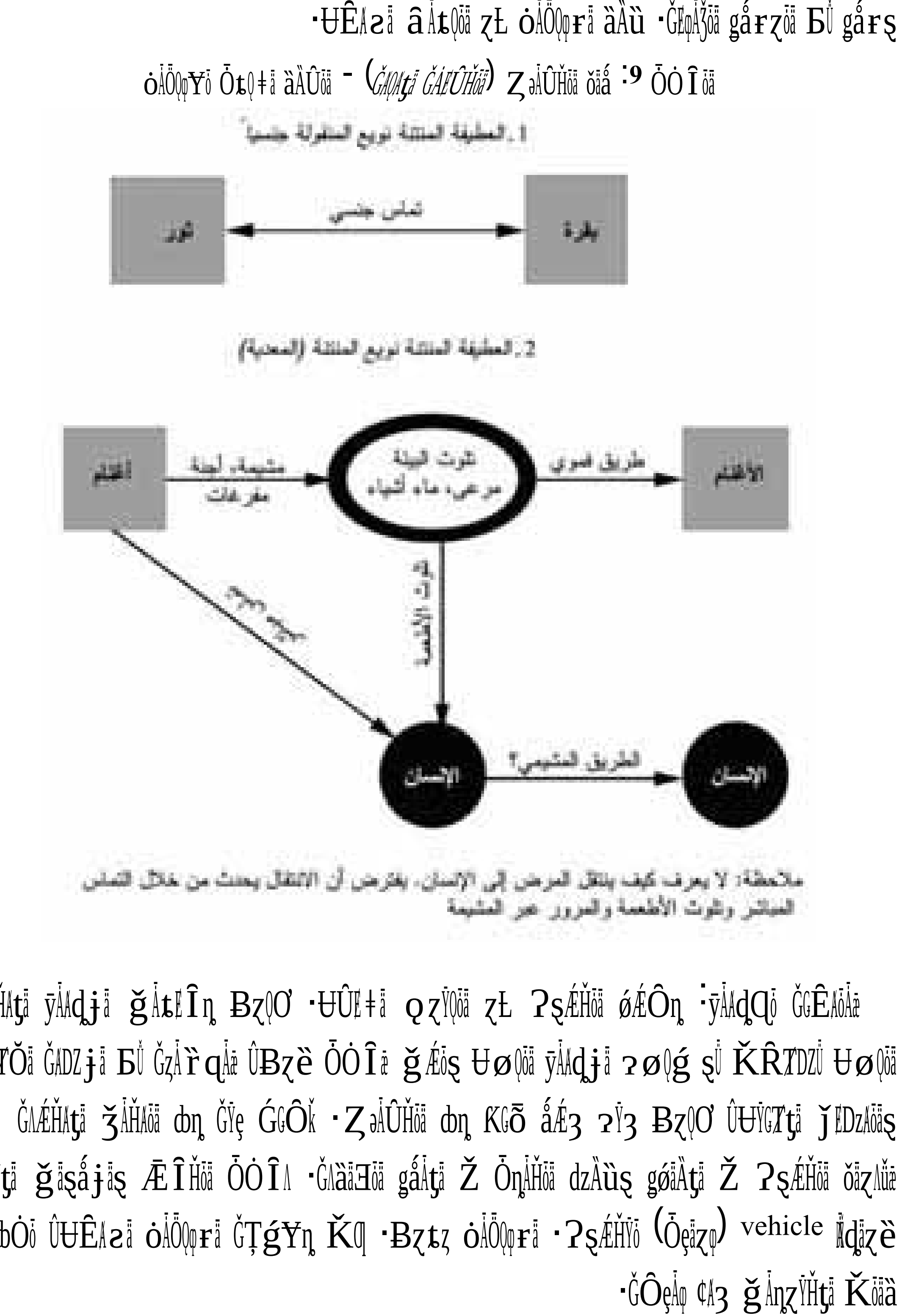
%40 – 25 … 5 - 3 … %5 … %10

4 - 3

(Morrison *et al.*, 1990)

·ȖÊʌƨä âǞȶǬöä ɀȽ ȯǞǬǬɸɍä äǞǖ ·ǦȽɸǞǯöä ɡắɍɀöä Ƃǖ ɡắɍȿ

ȯǞǬǬɎö ŌȶǬǂä äǞÛöä - (ǦǬǬȶä ǦǞȽÛǶöä) ǫəǞÛǶöä ŏäắ :9 ŌȮÎöä



ǦǞǼǶǞƫä ȳǞǞȡɉä ğǞȶȽÎɳ ɃɀǬƠ ·ȖÛȽǂä ƍɀǬǬöä ɀȽ ʔȿǼǶöä øǼÔɳ :ȳǞǞȡǬö ǦǦÊǞöǞǞ ǦȒȚǑöä ǦǞǅɈä Ƃǖ Ǧɀǟȑɋǟä ÛɃɀè ŌȮÎä ğǼöȿ ȖøǬöä ȳǞǞȡɉä ɿøǬǵ ȿǖ ǨȒȚǅǖ ȖøǬöä ǦǬƥ ǦǞǼǶǞƫä ʓǞǶǞöä ȸɳ ǦǬȩ ǴǦŌǨ ·ǫəǞÛǶöä ȸɳ ƘǦȭ ắǼȝ ɿǬȝ ɃɀǬƠ ÛȖǬǦȚƫä ǰȽǅǞöäȿ ǦǬɀǬƫä ğäȿắɉäȿ ǼÎǶöä ŌȮÎǞ ·ǦǞäǠöä ɡǿǞƫä Ž ŌɳǞǶöä ǅǞǖȿ ɡøäǞƫä Ž ʔȿǼǶöä ŏäɀǞȉ ǞɳɁ ȸȮǞ ȖȖÊʌƨä ȯǞǬǬɸɍä ǦȚǼɎɳ ǨǬ ·ɃɀȶɀǞ ȯǞǬǬɸɍä ·ʔȿǼǶɎö (ŌȩäɀǬ) vehicle ǞǬäɀè ·ǦÔȩǞɸ ȼǞȝ ğǞɳɀǶǞƫä ǨöäǞ

(Vazques *et al.*, ... (1983 ...

Andrews, P.J., F.W. Frank. Comparison of four diagnostic tests for detection of bovine genital vibriosis. *J Am Vet Med Assoc* 165:695–697, 1974.

Bokkenheuser, V. *Vibrio fetus* infection in man. I. Ten new cases and some epidemiologic observations. *Am J Epidemiol* 91:400–409, 1970.

Bokkenheuser, V.D., V.L. Sutter. *Campylobacter* infections. *In*: Balows, A., W.Y. Hausler, Jr., eds. *Bacterial Mycotic and Parasitic Infections*. 6th ed. Washington, D.C.: American Public Health Association; 1981.

Bouters, R., J. De Keyser, M. Fandeplassche, A. Van Aert, E. Brone, P. Bonte. *Vibrio fetus* infection in bulls. Curative and preventive vaccination. *Brit Vet J* 129:52–57, 1973.

Bryner, J.H. Vibriosis due to *Vibrio fetus*. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Bryner, J.H., P.C. Estes, J.W. Foley, P.A. O'Berry. Infectivity of three *Vibrio fetus* biotypes for gallbladder and intestines of cattle, sheep, rabbits, guinea pigs, and mice. *Am J Vet Res* 32:465–470, 1971.

Bryner, J.H., P.A. O'Berry, A.H. Frank. *Vibrio* infection of the digestive organs of cattle. *Am J Vet Res* 25:1048–1050, 1964.

Carroll, E.J., A.B. Hoerlein. Diagnosis and control of bovine genital vibriosis. *J Am Vet Med Assoc* 161:1359–1364, 1972.

Clark, B.L. Review of bovine vibriosis. *Aust Vet J* 47:103–107, 1971.

Clark, B.L., J.H. Duffy, M.J. Monsbourgh, I.M. Parsonson. Studies on venereal transmission of *Campylobacter fetus* by immunized bulls. *Aust Vet J* 51:531–532, 1975.

Devlin, H.R., L. McIntyre. *Campylobacter fetus* subsp. *fetus* in homosexual males. *J Clin Microbiol* 18:999–1000, 1983.

Firehammer, B.D., W.W. Hawkings. The pathogenicity of *Vibrio fetus* isolated from ovine bile. *Cornell Vet* 54:308–314, 1964.

Harvey, S.M., J.R. Greenwood. Probable *Campylobacter fetus* subsp. *fetus* gastroenteritis. *J Clin Microbiol* 18:1278–1279, 1983.

Hoerlein, A.B. Bovine genital vibriosis. *In*: Faulkner, L.C., ed. *Abortion Diseases of Livestock*. Springfield: Thomas; 1968.

Hoerlein, A.B., E.J. Carroll. Duration of immunity to bovine genital vibriosis. *J Am Vet Med Assoc* 156:775–778, 1970.

Laing, J.A. Vibrio fetus *Infection of Cattle*. Rome: Food and Agriculture Organization; 1960. (Agricultural Studies 51).

Miller, V.A. Ovine genital vibriosis. *In*: Faulkner, L.C., ed. *Abortion Diseases of Livestock*. Springfield: Thomas; 1968.

Miner, M.L., J.L. Thorne. Studies on the indirect transmission of *Vibrio fetus* infection in sheep. *Am J Vet Res* 25:474–477, 1964.

Morrison, V.A., B.K. Lloyd, J.K.S. Chia, C.U. Tuazon. Cardiovascular and bacteremic manifestations of *Campylobacter fetus* infection: Case report and review. *Rev Infect Dis* 12:387–392, 1990.

Osburn, B.I., R.K. Hoskins. Experimentally induced *Vibrio fetus* var. *intestinalis* infection in pregnant cows. *Am J Vet Res* 31:1733–1741, 1970.

Schurig, G.G.D., C.E. Hall, K. Burda, L.B. Corbeil, J.R. Duncan, A.J. Winter. Infection patterns in heifers following cervicovaginal or intrauterine instillation of *Campylobacter* (*Vibrio*) *fetus venerealis*. *Cornell Vet* 64:533–548, 1974.

Schurig, G.G.D., C.E. Hall, L.B. Corbeil, J.R. Duncan, A.J. Winter. Bovine venereal vibriosis. Cure genital infection in females by systemic immunization. *Infect Immun* 11: 245–251, 1975.

Storz, J., M.L. Miner, A.E. Olson, M.E. Marriott, Y.Y. Elsner. Prevention of ovine vibriosis by vaccination: Effect of yearly vaccination of replacement of ewes. *Am J Vet Res* 27:115–120, 1966.

Vásquez, L.A., L. Ball, B.W. Bennett, G.P. Rupp, R. Ellis, J.D. Olson, *et al.* Bovine genital campylobacteriosis (vibriosis): Vaccination of experimentally infected bulls. *Am J Vet Res* 44:1553–1557, 1983.

Véron, M., R. Chatelain. Taxonomic study of the genus *Campylobacter* Sebald and Véron and designation of the neotype strain for the type species, *Campylobacter fetus* (Smith and Taylor) Sebald and Véron. *Int J Syst Bacteriol* 23:122–134, 1973.

White, F.H., A.F. Walsh. Biochemical and serologic relationships of isolants of *Vibrio fetus* from man. *J Infect Dis* 121:471–474, 1970.

CAT-SCRATCH DISEASE

ICD 10 A28.1

(Birkness *et al*., 1992, English *et al*., 1988)

°37 … °32 … °32 … (°37)

(Birkness *et al*., *Afipia felis* … Postulates … 1992)

(1988)

Bartonella herselae … (*Rochalimea*

(Benenson, 1990)

%75 … 2000 … (1982)

%10

Healed ... inoculation

(Carithers and Margileth, 1991)

(Delahoussaye and Osborne, 1990)

%65

%90

(Hainer, 1987)

(1987)

(3 – 2)

[illegible] (August, [illegible] 1988)

[illegible] °60 [illegible] 10 [illegible] 5:1 [illegible] 0.1 [illegible] 0.5 [illegible] 48 [illegible] %95 [illegible] 591 [illegible] %4.1 [illegible]

[illegible] *Afipia felis* [illegible]

[illegible]

ÙøШƐƥøDžll€

Andrews, C., H.G. Pereira. *Viruses of Vertebrates*. 3rd ed. Baltimore: Williams & Wilkins; 1972.

August, J.R. Cat-scratch disease. Zoonosis update. *J Am Vet Med Assoc* 193:312–315, 1988.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Birkness, K.A., V.G. George, E.H. White, *et al.* Intracellular growth of *Afipia felis*, a putative etiologic agent of cat-scratch disease. *Infect Immun* 60:2281–2287, 1992.

Carithers, H.A. Cat-scratch disease. An overview based on a study of 1,200 patients. *Am J Dis Child* 139:1124–1133, 1985.

Carithers, H.A., A.M. Margileth. Cat-scratch disease. Acute encephalopathy and other neurologic manifestations. *Am J Dis Child* 145:98–101, 1991.

Delahoussaye, P.M., B.M. Osborne. Cat-scratch disease presenting as abdominal visceral granulomas. *J Infect Dis* 161:71–78, 1990.

Emmons, R.W., J.L. Riggs, J. Schachter. Continuing search for the etiology of cat-scratch disease. *J Clin Microbiol* 4:112–114, 1976.

English, C.K., D.J. Wear, A.M. Margileth, *et al.* Cat-scratch disease. Isolation and culture of the bacterial agent. *JAMA* 259:1347–1352, 1988.

Euseby, J.B. Le genre *Afipia* et la maladie de griffes du chat. *Revue Med Vet* 143:95–105, 1992.

Gerber, M.A., A.K. Sedgwick, T.J. MacAlister, K.B. Gustafson, M. Ballow, R.C. Tilton. The aetiological agent of cat-scratch disease. *Lancet* 1:1236–1239, 1985.

Griesemer, R.A., L.G. Wolfe. Cat-scratch disease. *J Am Vet Med Assoc* 158:1008–1012, 1971.

Hainer, B.L. Cat-scratch disease. *J Fam Pract* 25:497–503, 1987.

Heroman, V.M, W.S. McCurley. Cat-scratch disease. *Otolaryngol Clin North Am* 15:649–658, 1982. Cited in: Delahoussaye, P.M., B. Osborne. Cat-scratch disease presenting as abdominal visceral granulomas. *J Infect Dis* 161:71–78, 1990.

Macrae, A.D. Cat-scratch fever. *In*: Graham-Jones, O., ed. *Some Diseases of Animals Communicable to Man in Britain*. Oxford: Pergamon Press; 1968.

Margileth, A.M. Cat-scratch disease. A therapeutic dilemma. *Vet Clin North Am Small Anim Pract* 17:91–103, 1987. Cited in: August, J.R. Cat-scratch disease. Zoonosis update. *J Am Vet Med Assoc* 193:312–315, 1988.

Rose, H.M. Cat-scratch disease. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Warwick, W.J. The cat-scratch syndrome, many diseases or one disease. *Progr Med Virol* 9:256–301, 1967.

Wear, D.J., A.M. Margileth, T.L. Hadfield, *et al.* Cat-scratch disease: A bacterial infection. *Science* 221:1403–1404, 1983.

CLOSTRIDIAL FOOD POISONING ǀ ƑǐƙƯƊŽǁƑĠ Ǐ ƏƐƤƩǁƐ !ƊŽ ƨ Ɨǁ Ɛ

ƕǁǋǰȿǳƊŽǁƐ (ƕǐ ǐ ǁǋǁƐ ƕǐƙƯƊŽǁƐ) ƕƊŽƯƑƟǁƐ ƕǐƙƯƊŽǁƐ ƊŽƳ !ǖƑǳǁƐ !ƊŽ ƨ Ɨǁ Ɛ **ICD -10 A05.2**

!ƑƴƯǁƑĠ

ICD -10 A05.2 foodborne *Clostridium perfringens* [*Clostridium welchii*] intoxication

.Clostriodial Toxicosis ɄǯÛţä ǃȶÊǪöä ÛɄǯÛţä öÅȞŋɟäş ğÆȞţä ā ÅȚǪöä :ğ ÅȥǻäÀţä

(*C. Welchii* ǴǼÎöȥäǟ ǴǼǯÛţä) *Clostridium perfringens* ǴȶüÅΣä ǴǼǯÛţä :ğ ÅÆǤǤÊöä

ğ ÅφÅÅÅǽ ǰǪÅǩ ÛǦȚÀȞɯ ǦõÀȞǪŋ Ƙȡ ÛȟäȥǽǬö ğÆöȥŋ ÛƴäÀ8öä ǦÆǝÅƶǕ ÛǦÆǝäȥȽ ɍ ǦÆÔɜ ɄȽş ǦÆǯÛţä ÀǪÅÖǪǩ ǬÆǵ Ûȳ °45ş ȳ41 ƙǝ ɄȽ ÅȽȥȶÅö ǦÆöÅǯţä ğøäÀΣä ǦƊZøǻ .ǦÅȥŸǹ ǯøÅǹ Ž ǖÆƊZ ǃȚŋ ȥȶÅöä äØȽ .ǃÆǪäÀƨä ǃȚȞţ ǦÆèÅÆę Ǧɜ Àè ƎǪȞÅ ÅȶÆȥ ǦƊZøÆöä ȻØȽ Ž ǦȶüÅΣä .ğ ÅǪǤÅǪÊţä Ž ǴȶüÅΣä ǴǼǯÛţä ȸŋ ɄøǨÅǤφɋä ǑȮÎŸö ǦŸǨÅę ȳ °60 ğøäÀΣä ǦƊZøÆȥ .ȳÅȞÛöä ȓÅƴǕ ǦÊȐ õÅȽ .(Labbe, 1989) ǦȶȞüɟä Ž ÆƊZȥǩ ÅŋÆɜ ğøäÀȞŸö ǦŋşÅÖŋ ÀǯõǕ ɄȽş .ǦÆèÅèǕ ğ ÅφÅÅÅǽ ǦȞǝøǕ ǰǪÅǩ ȻØȽş .E ƂǕ A ȸŋ ȣÀǵɟÅǽ ÂȽȶǪǩ ğ ÅφÅÅØŸö ğÆöȥŋ ǦÅŸǪƯ ǦƊZøǻ .öÅȞŋɟä Ž ȟȥǤǪöä öŸǹ ǦÅȥȞţä ğ ÅφÅÅØöä ȸŋ ğƘǤõ ğ ÅÆȶõ ǦÆǨÅǤφɋä öÅÖȉɟä ǰǪÅǩ .ȳ °40ş ȳ °35 ƙǝ ɄȽ ȟȥǤǪŸö ɁŸǯţä ğøäÀΣä

ɉÅŋä Ōõ Ž ğǻȥƊZȥŋ ȻǕ) øÅÎǪφɍä ǦȞèäş A ÙȶÅöä - ǴȶüÅΣä ǴǼǯÛţä :ŽäÀ8ƨä ţäȥǪöä ȓÅƴɟä ÆƊZȥǩ .ȻÅȞöä Ž ğ ÅφäȥÆΣäş ɉÊφȒö ȻȥȞţä ŌÆǤÊöä Žş ǦǝÀǪöä Ž .(ɉÅÖŋ Ōõş .ûȥȞŸŋ ɄȶÆŸęǕ ŽäÀ8ƊZ ţäȥǩ Eş B ƙÛȶÅŸö .ÙŌȥ ğ ÅφäȥÆȞŸö ȻȥȞţä ŌÆǤÊöä Ž ʔÀǹɟä

ǦÆǯÛţä ȸɜ ǃƊZÅÅöä ɄǝäØ8ö ǃȶÊǪöä ȸŋ ğ ÅÆȉÅȥ ǫÆƠ ɉǕ ŌȶǪɈä ȸŋ :ɉÊφǬä Ž ǫşÆΣä .ğøȥÛǪţä ɉäÆŸǤöä ȸŋ ğ ÅŋȥŸȞţä ǃȚȞŋ ɄøǨüǩ ȸÖö ǗȂÅȞöä ʔȥǪÊŋ ɁŸɜ A ÙȶÅöä - ǦȶüÅΣä ǃȶÊǪöä ɉǕ øÆŌÅ ÛǤÅɜ ŋÆŸǤǪöä ÆƊZäş ō Àŋ ɄǝäØ8öä ǃȶÊǪöä ǬÆǵ :ɁȶȚȞöä ÅÆφÅÛÅÅǽ Ž ā ÅÔÅ .ǦŋÅȞöäş ǦÆŸǝÅȞöä ğ ÅÆȉÅÅöä ȸŋ ƘǯÖöä ƂǕ ǦȥÀȓǕ Ûğ ɍΣä Ōõ ȸŋ %30 ÆǤÊÅ ɄǯÛţä .ǦÆȉÅȥ Ōõ Ž ŌÔÅȉ 37 ȼöÆȞŋ Åŋ

1980 - [illegible] 6093 [illegible] 62 [illegible] %7.4 [illegible] 1976 [illegible] %14.8 [illegible] 200 [illegible] 6 [illegible] 23.5 [illegible] .(Shandern *et al*., 1983)

[illegible] 24 [illegible] 60 [illegible] 41 [illegible] %56 [illegible] .(Michanie *et al*., 1983) [illegible] C [illegible]

[illegible] E [illegible] D [illegible] C [illegible] B [illegible]

[illegible] A [illegible] °100 [illegible] °100 [illegible] 10

[illegible] 24 - 6 [illegible]
.Preformed [illegible]
[illegible]
[illegible] A [illegible]
[illegible]
[illegible]
(96 – 76 [illegible]) [illegible] 50 [illegible]
[illegible] 11 [illegible]
(Larson and [illegible] 46 [illegible] 16 [illegible]
.Borrielo, 1988)

C [illegible]
[illegible]

[illegible] Necrolizing [illegible]
[illegible] 3 [illegible] 17 [illegible] A [illegible]
[illegible] 7 [illegible]
[illegible]
[illegible] .A [illegible]
[illegible] Necrotic [illegible]
.(Van Kessel *et al*., 1985) [illegible]

[illegible] D [illegible]
[illegible]

[illegible] A [illegible]

A A

.(Gillespie and Timoney, 1981) 12 - 6

B

(Struck C

.(Timoney *et al.*, 1988)

D

E

.(Timoney *et al.*, 1988)

A

(Terrors – Anjel *et al.*, 1977)

A

.(Smith, 1965)

.(Craven, 1980)

.(Narayan, 1982)

%86

(Narayan, 174 .1982)

.(Timoney *et al*., 1988)

.(Timoney *et al*., 1988)

(Van Baelen

.and Devriex, 1987)

- 24

[illegible] 48 [illegible] 10^6 [illegible] °10 [illegible] 70 [illegible] %40 [illegible] .(Shandera, 1983) [illegible]

[illegible] .(Bartlett, 1990) [illegible]

[illegible] (Michanie *et al.*, 1993) [illegible]

[illegible]

Bartlett, J.G. Gas gangrene (other clostridium-associated diseases). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Craven, S.E. Growth and sporulation of *Clostridium perfringens* in foods. *Food Techn* 34:80–87, 1980.

Dobosch, D., R. Dowell. Detección de enterotoxina de *Clostridium perfringens* en casos de intoxicación alimentaria. *Medicina* 43:188–192, 1983.

Faich, G.A., E.J. Gangarosa. Food poisoning, bacterial. *In*: Top, F.M., P.F. Wehrle, eds. *Communicable and Infectious Diseases*. 7th ed. Saint Louis: Mosby; 1972.

Gillespie, J.H., J.F. Timoney. *Hagan and Bruner's Infectious Diseases of Domestic Animals*. 7th ed. Ithaca: Cornell University Press; 1981.

Hobbs, B.C. *Clostridium perfringens* and *Bacillus cereus* infections. *In*: Riemann, H., ed. *Food-borne Infections and Intoxications*. New York: Academic Press; 1969.

Labbe, R. *Clostridium perfringens*. *In*: Doyle, M.P., ed. *Food-borne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Larson, H.E., S.P. Borriello. Infectious diarrhea due to *Clostridium perfringens*. *J Infect Dis* 157:390–391, 1988.

Michanie, S., A. Vega, G. Padilla, A. Rea Nogales. Brote de gastroenteritis provocado por el consumo de empanadas de carne. *Alimentacion Latinoamer* 194:49–54, 1993.

Narayan, K.G. Food-borne infection with *Clostridium perfringens* Type A. *Int J Zoonoses* 9:12–32, 1982.

Roberts, R.S. Clostridial diseases. *In*: Stableforth, A.W., I.A. Galloway, eds. *Infectious Diseases of Animals*. London: Butterworths; 1959.

Rose, H.M. Diseases caused by Clostridia. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Shandera, W.X., C.O. Tacket, P.A. Blake. Food poisoning due to *Clostridium perfringens* in the United States. *J Infect Dis* 147:167–170, 1983.

Smith, H.W. Observations on the flora of the alimentary tract of animals and factors affecting its composition. *J Path Bact* 89:95–122, 1965. Cited in: Van Baelen, D., L.A. Devriese.

Presence of *Clostridium perfringens* enterotoxin in intestinal samples from farm animals with diarrhoea of unknown origin. *J Vet Med B* 34:713–716, 1987.

Smith, L.D.S. Clostridial diseases of animals. *Adv Vet Sci* 3:463–524, 1957.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

Torres-Anjel, M.J., M.P. Riemann, C.C. Tsai. *Enterotoxigenic* Clostridium perfringens *Type A in Selected Humans: A Prevalence Study*. Washington, D.C.: Pan American Health Organization; 1977. (Scientific Publication 350).

Van Baelen, D., L.A. Devriese. Presence of *Clostridium perfringens* enterotoxin in intestinal samples from farm animals with diarrhoea of unknown origin. *J Vet Med B* 34:713–716, 1987.

Van Kessel, L.J.P., H.A. Verbugh, M.F. Stringer, *et al*. Necrotizing enteritis associated with toxigenic Type A *Clostridium perfringens* [letter]. *J Infect Dis* 151:974–975, 1985.

[illegible]
CLOSTRIDIAL WOUND INFECTIONS

ICD 10 A 48.0 gas gangrene [illegible]

[illegible] Myonecrosis [illegible]

[illegible] *Speticum* [illegible] *novyi* [illegible] *Fallax* [illegible] *Sordell* [illegible]

[illegible]

[illegible]

(Finegold, 1977)

(Bartlett, 1990)

[illegible] (Bartlett, 1990)

[illegible]

[illegible]

[illegible] (Finegold, 1977) [illegible]

[illegible]

[illegible] Blackleg [illegible] Chauvoei [illegible]

[illegible]

ÜøШƐþøDžǁƐ

Bartlett, J.G. Gas gangrene (other clostridium-associated diseases). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Bruner, D.W., J.H. Gillespie. *Hagan's Infectious Diseases of Domestic Animals*. 6th ed. Ithaca: Comstock; 1973.

Finegold, S.M. *Anaerobic Bacteria in Human Disease*. New York: Academic Press; 1977.

Joklik, W.K., D.T. Smith. *Zinsser's Microbiology*. 15th ed. New York: Meredith; 1972.

MacLennan, J.D. The histotoxic clostridial infections of man. *Bact Rev* 26:177–274, 1962.

Prévot, A.R., A. Turpin, P. Kaiser. *Les bactéries anaerobies*. Paris: Dunod; 1967.

Rose, H.M. Disease caused by clostridia. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Rosen, M.M. Clostridial infections and intoxications. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Smith, D.L.S. Clostridial diseases of animals. *Adv Vet Sci* 3:465–524, 1957.

Smith, L.D., L.V. Holderman. *The Pathogenic Anaerobic Bacteria*. Springfield: Thomas; 1968.

COLIBACILLOSIS ȟǐǆǊǁǋǌǁƐ ĺƑǐƬƴǁƐ ƅƐǭ

ÜƅƑƴǅǔǁ ȟƮþǄǅǁƐ *ȟǐǆǊǁǋǌǁƐ ȟǐĺǐþ ĺǕƐ* ǌǊǭY **ICD- 10 A04.0**

ǌǊǭY **A04.2** Û ă ǋƴǅǁƐ ǄƑƵǐƤǂǁ ȟШȞǆǅǁƐ *ȟǐǆǊǁǋǌǁƐ ȟǐĺǐþ ĺǕƐ* ǌǊǭY**AO 40.1**

ȟǐǆǊǁǋǌǁƐ ȟǐĺǐþ ĺǕƐ ǌǊǭY **AO 40.3** ÜƅƑƴǅǔǁ ȟǐȒƑƩǁƐ *ȟǐǆǊǁǋǌǁƐ ȟǐĺǐþ ĺǕƐ*

ă ǋƴǅǁƐ ƺ Ɽǆǂǁ ǄY ȟǄШƑǆǁƐ

ICD- 10 A04.0 enteropthogenic *Escherichia coli* infection; AO 40.1 enterotoxigenic *Escherichia coli* infection; A04.2 enteroinvasive *Escherichia coli* infection; AO 40.3 enterohemorrhagic *Escherichia coli* infection

ÛǦǂǫǭǒǭȬöä ğ ÄǂÔȞöÄǽ ƿǼöä ȴȶÊǩ Ûcolibacteriosis ǦǂǫǭǒǭȬöä ȴǂǭäÀƨä öäá ׃ğ ÄǭáäÀţä ·öÄȞȠǬǒ ô ÀȶţäöÄȾèǭä

ǦŸÊÔÀö (*E.coli*) *ǦǂǫǭǒǭȬöä ǦǂÒÄÏǭä* ȗȶǬÄǩ ׃ȗǄǭǒǭÄÂǂÄöä ô äÄȠǭäȿ ğ ÄǂǤÊöä

(Kauffman) ... 17 ... 56 ... (Fimbrial) ... O:H ...

... O157:H7 ... (Riley *et al*) 1983 ... 1993/2/ 28 ... 1992/5/15 ... 470 ... (Spencer 1993. Dorn 1993) ... O157:H7 ... (1991) ...

[illegible] O45: H2 [illegible] O26: H11 [illegible] O4, O111, O145 [illegible] 60 [illegible] K Shiga-like [illegible] 1 [illegible] (HeLa، Vero [illegible]) [illegible] 2، 1 [illegible] (O' Brien and [illegible] verotoxin [illegible] .Holmes 1987) [illegible]

[illegible] O157:H7 [illegible] .(Griffin and Tauxe 1991) [illegible]

10 [illegible] 17 [illegible] :1992 – 1982 [illegible] :1992 [illegible] 243 [illegible] .1993 [illegible] .(CDC, 1993) [illegible] 100 [illegible] 8 [illegible] 18 [illegible] 13 [illegible] :(1992 – 1982) [illegible]

.(Grittin and Tauxa, 1991) [illegible]

[illegible] 25 [illegible] 28 [illegible] 7000 [illegible] %5 [illegible] .O157: H7 (Spencer, 1993) [illegible] %10 - 5 [illegible] O157: H7 [illegible] .(Dorn, 1993) [illegible]

[illegible] 9-2 [illegible] %50 [illegible] 4 [illegible] %95 [illegible] %75 - 56 [illegible] .(Griffen and Tauxe, 1991) [illegible] O157:H7 [illegible] (HUS) [illegible]

%7-2 .(Griffan, 1991) O157:H7

O157:H7 .(Carter *et al.*, 1987)

.(Dorn, 1993) .O157:H7

6 9 1989 %75 12 243 .(Dorn, 1993)

(SMAC) O157:H7

(Doyle and Padhye, 1989)

antigenic

(WHO, 1991) CS6 SC1 CFA-1

987P (K88) F4 (K99 F5

987P F41 (K99) F5 K88 (F4)

400

.(Doyle and Padhye, 1989)

18 - 10

%5-1

.(Beneson, 1990)

[illegible]

[illegible] (EPEC) [illegible]

[illegible]

[illegible] DNA [illegible] HEP-2 [illegible]

[illegible]

.(Beneson, 1990) [illegible]

[illegible] HEP-2 [illegible] 40 [illegible] 42 [illegible] 1 [illegible] 1 [illegible] DNA [illegible]
.(Vial *et al* 1988: Levine *et al* 1988)

[illegible]
.(Benenson, 1990) [illegible] 2-1 [illegible]

[illegible]

[illegible] (Whtie Scours [illegible] 10 [illegible] 36 - 24 [illegible] M [illegible]

[illegible]

.(K99) F5

.(Gillespirand Timoney, 1981)

%5 %1

12

%50

ST

.(Gillespie and Timoney, 1981) LT

987P F41. (K99) F5 (K88) F4

(K88) F4

(Casey *et al.*, 1992)

14-6

(Nielsen, 1986)

%100 - 20 %35 - 10

(Dobrescu, 1983 Marques *et al.*, 1987 "HeLa" Vero
.Kausche *et al.,* 1992)

(Timoney *et al.*, 1988)

(O'Brien, 1985) %4 3 3-2

[illegible] (White *et al* 1990, Pages Mante and Costa Quintana [illegible]) Hjarre's [illegible] 1987) [illegible]

[illegible] (1989) [illegible] (Black *et al.*, 1981) [illegible] LT [illegible] ST [illegible] 78 :H12 [illegible] (Echeverria *et al.*, 1978, cited in Doyle and Padhye [illegible] 1989) [illegible] (Du Pont *et al.*, 1971, Cited in Doyle and Padhye, 1989) [illegible]

.(Timoney *et al*., 1988)

(K88) F4 (K9) F5 (K99) F5 (Rutter *et al* 1976, Nagy 1980, Myers 1978) (Levine and Lanatu, 1983).

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Biester, H.E., L.H. Schwarte, eds. *Diseases of Poultry*. 4th ed. Ames: Iowa State University Press; 1959.

Binsztein, N. Estudio de la diarrea. Factores de virulencia and mecanismos fisiopatogénicos. *Bacteriol Clin Argent* 1:138–142, 1982.

Black *et al*., 1981. Cited in: Doyle, M.P., V.V. Padhye. *Escherichia coli*. *In*: Doyle, M.P., ed. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Carter, A.O., A.A. Borczyk, J.A. Carlson, *et al*. A severe outbreak of *Escherichia coli* O157:H7-associated hemorrhagic colitis in a nursing home. *N Engl J Med* 317:1496–1500, 1987.

Casey, T.A., B. Nagy, H.W. Moon. Pathogenicity of porcine enterotoxigenic *Escherichia coli* that do not express K88, K99, F41, or 987P adhesins. *Am J Vet Res* 53:1488–1492, 1992.

Chin, J., ed. *Control of Communicable Diseases Manual.* 17th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 2000.

Dobrescu, L. New biological effect of edema disease principle (*Escherichia coli* neurotoxin) and its use as an in vitro assay for this toxin. *Am J Vet Res* 44:31–34, 1983.

Dorn, C.R. Review of foodborne outbreak of *Escherichia coli* O157:H7 infection in the western United States. *J Am Vet Med Assoc* 203:1583–1587, 1993.

Doyle, M.P., V.V. Padhye. *Escherichia coli. In:* Doyle, M.P., ed. *Foodborne Bacterial Pathogens.* New York: Marcel Dekker; 1989.

Du Pont *et al.*, 1971. Cited in: Doyle, M.P., V.V. Padhye. *Escherichia coli. In:* Doyle, M.P., ed. *Foodborne Bacterial Pathogens.* New York: Marcel Dekker; 1989.

Echeverria *et al.*, 1978. Cited in: Doyle, M.P., V.V. Padhye. *Escherichia coli. In:* Doyle, M.P., ed. *Foodborne Bacterial Pathogens.* New York: Marcel Dekker; 1989.

Edwards, P.R., W.H. Ewing. Identification of *Enterobacteriaceae.* 3rd ed. Minneapolis: Burgess; 1972.

Ellens, D.J., P.W. de Leeuw, H. Rozemond. Detection of the K99 antigen of *Escherichia coli* in calf feces by enzyme-linked immunosorbent assay (ELISA). *Tijdschr Diergeneeskd* 104:169–175, 1979.

Fraser, C.M., J.A. Bergeron, A. Mays, S.E. Aiello, eds. *The Merck Veterinary Manual.* 7th ed. Rahway: Merck; 1991.

Gay, C.C. *Escherichia coli* and neonatal disease of calves. *Bact Rev* 29:75–101, 1965.

Gillespie, J.H., J.F. Timoney. *Hagan and Bruner's Infectious Diseases of Domestic Animals.* 7th ed. Ithaca: Comstock; 1981.

Griffin, P.M., R.V. Tauxe. The epidemiology of infections caused by *Escherichia coli* O157:H7, other enterohemorrhagic *E. coli*, and the associated hemolytic uremic syndrome. *Epidemiol Rev* 13:60–98, 1991.

Kausche, F.M., E.A. Dean, L.H. Arp, *et al.* An experimental model for subclinical edema disease (*Escherichia coli* enterotoxemia) manifest as vascular necrosis in pigs. *Am J Vet Res* 53:281–287, 1992.

Levine, M.M., C. Lanata. Progresos en vacunas contra diarrea bacteriana. *Adel Microbiol Enf Infec* 2:67–118, 1983.

Levine, M.M, V. Prado, R. Robins-Browne, *et al.* Use of DNA probes and HEp-2 cell adherence assay to detect diarrheagenic *Escherichia coli. J Infect Dis* 158:224–228, 1988.

Marques, L.R.M., J.S.M. Peiris, S.J. Cryz, *et al. Escherichia coli* strains isolated from pigs produce a variant Shiga-like toxin II. *FEMS Microbiol Lett* 44:33–38, 1987.

Merson, M.H., R.H. Yolken, R.B. Sack, J.L. Froehlich, H.B. Greenberg, I. Huq, *et al.* Detection of *Escherichia coli* enterotoxins in stools. *Infect Immun* 29:108–113, 1980.

Mills, K.W., K.L. Tietze, R.M. Phillips. Use of enzyme-linked immunosorbent assay for detection of K88 pili in fecal specimens from swine. *Am J Vet Res* 44:2188–2189, 1983.

Myers, L.L. Enteric colibacillosis in calves: immunogenicity and antigenicity of *Escherichia coli* isolated from calves with diarrhea. *Infect Immun* 13:1117–1119, 1978.

Nagy, B. Vaccination of cows with a K99 extract to protect newborn calves against experimental enterotoxic colibacillosis. *Infect Immun* 27:21–24, 1980.

Nielsen, N.O. Edema disease. *In:* Leman, A.D., B. Straw, R.D. Glock, *et al.*, eds. *Diseases of Swine.* 6th ed. Ames: Iowa State University Press; 1986.

O'Brien, A.D., R.K. Holmes. Shiga and Shiga-like toxins. *Microbiol Rev* 51: 206–220, 1987.

O'Brien, J.D. Swollen head syndrome in broiler breeders. *Vet Rec* 117:619–620, 1985.

Pages Mante, A., L. Costa Quintana. Síndrome de cabeza hinchada (SH). Etiología and profilaxis. *Med Vet* 4:53–57, 1987.

Riley, L.W., R.S. Remis, S.D. Helgerson, *et al.* Hemorrhagic colitis associated with a rare *Escherichia coli* serotype. *N Engl J Med* 308:681–685, 1983.

Robins-Browne, R.M., M.M. Levine, B. Rowe, E.M. Gabriel. Failure to detect conventional enterotoxins in classical enteropathogenic (serotyped) *Escherichia coli* strains of proven pathogenicity. *Infect Immun* 38:798–801, 1982.

Rowe, B., J. Taylor, K.A. Bettelheim. An investigation of traveller's diarrhoea. *Lancet* 1:1–5, 1970.

Rutter, J.M., G.W. Jones, G.T. Brown, M.R. Burrows, P.D. Luther. Antibacterial activity in colostrum and milk associated with protection of piglets against enteric disease caused by K88-positive *Escherichia coli*. *Infect Immun* 13:667–676, 1976.

Ryder, R.W., R.A. Kaslow, J.G. Wells. Evidence for enterotoxin production by a classic enteropathogenic serotype of *Escherichia coli*. *J Infect Dis* 140:626–628, 1979.

Saltys, M.A. *Bacteria and Fungi Pathogenic to Man and Animals*. London: Baillière, Tindall and Cox; 1963.

Spencer, L. Escherichia coli O157:H7 infection forces awareness of food production and handling. *J Am Vet Med Assoc* 202:1043–1047, 1993.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Preliminary report: Foodborne outbreak of *Escherichia coli* O157:H7 infections from hamburgers—western United States, 1993. *MMWR Morb Mort Wkly Rep* 42:85–86, 1993.

Vial, P.A., R. Robins-Browne, H. Lior, *et al.* Characterization of enteroadherent-aggregative *Escherichia coli*, a putative agent of diarrheal disease. *J Infect Dis* 158:70–79, 1988.

White, D.G., R.A. Wilson, A. San Gabriel, *et al.* Genetic relationship among strains of avian *Escherichia coli* associated with swollen-head syndrome. *Infect Immun* 58:3613–3620, 1990.

Williams, L.P., B.C. Hobbs. *Enterobacteriaceae* infections. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

World Health Organization (WHO). Research priorities for diarrhoeal disease vaccines: Memorandum from a WHO meeting. *Bull WHO* 69:667–676, 1991.

World Health Organization Scientific Working Group. *Escherichia coli* diarrhoea. *Bull WHO* 58:23–36, 1980.

CORYNEBACTERIOSIS lƑĭqƗǋǁɛ ƀɛq

ƥqɔ ǄƑlǄ Ĭʒ ƕƻTǄ ƥĭʒ ǌƥqɕ ƕĭǄǋƙƥɯ ƒ ɛƥǄɕ A48 ICD-10

A48 ICD-10 Other bacterial diseases, not elsewhere classified

ŏƟÎöä ȒĦä ǦƎAHʊAŋ ğÀƎÔʒ ȡŋ *Corynebacterium* ǦΛÆǩζöä ȄADZ ƺöŭQΛ : ğÀƎGGÊöä ǦƎəäζȽ ǗȟäζäƇǭ ǦDzQAŋ Ƙɖ ǗǦȚȦHʉ Ƙɖ ǗǦõȀHʊQŋ Ƙɖ ·ȒȶΣÀä gÆŋÀö Ƙɖ ǗӯäÀ8öä ǦƎäÀƶǕ ǗNocardia ǦΛǻøΛõζΛöä ʒŋ ȄAƨä äØȽ ȖGǩÄΛ ·äɼÀǩÀÒöä ǦƎäÀƶǕ ǗǦƎəäζȽ Ƙɖ ȿǕ ǦΛøÀƎQṅä .*Mycobacterium* gÄǕÀQȶäȿ Ǘ*Rhodococcus* gÀȶ ǂäȿ

C.diphtheriae

.C.renale (*C. bovis*) *C.pseudotuberculosis*

.Diphtheroids

C. bovis *.ulcerans*

C.kutscheri 3

.C.Custitidis *C. Pilosum* *Crenale*

C.bovis

.(Gillespie and Timoney 1981)

C.renale .(Wiggins *et al* 1981)

C.kutscheri

.(Brawn, 1990)

.(Brown 1990; Kerch and Hollis 1991)

:*C. bovis*

(Vale and Scott 1977,

.Brown 1990)

:*C. renale*

:*C.kutscheri*

(Kerch and

Hollis, 1991)

.(Brown, 1990)

.(Timoner *et al*., 1988)

C. pilosum

C. Cystitidis:

C. bovis

C. ulcerans

(Lipsky *et al.*, 1982)

(*Spermophilus richardsoni*)

(%18) 63

350

10 ... 4

(Olson *et al.*, 1988)

(May, 1972)

C.kutscheri 15

(Fraser *et al.*, 1991)

C. diphtheriae 6 300

(Okewole *et al.*, 1990)

(Timoney *et al.*, 1986)

[illegible] .(Brown, 1990)

[illegible] 74 [illegible] (Brooks *et al.*, [illegible] %36 [illegible] .1983)

[illegible] *Polisum* [illegible] *Polisum* [illegible]

[illegible]

[illegible]

[illegible]

ŲøШƐþøǅǁƐ

Brooks, B.W., D.A. Barnum, A.H. Meek. An observational study of *Corynebacterium bovis* in selected Ontario dairy herds. *Can J Comp Med* 47:73–78, 1983.

Brown, A.E. Other corynebacteria. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Fraser, C.M., J.A. Bergeron, A. Mays, S.E. Aiello. *The Merck Veterinary Manual*. 7th ed. Rahway: Merck; 1991.

Gillespie, J.H., J.F. Timoney. *Hagan and Bruner's Infectious Diseases of Domestic Animals*. 7th ed. Ithaca: Comstock; 1981.

Krech, T., D.G. Hollis. *Corynebacterium* and related organisms. *In*: Balows, A., W.J. Hausler, K.L. Hermann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Lipsky, B.A., A.C. Goldberger, L.S. Tompkins, J.J. Plorde. Infections caused by nondiphtheria corynebacteria. *Rev Infect Dis* 4:1220–1235, 1982. Cited in: Krech, T., D.G. Hollis. *Corynebacterium* and related organisms. *In*: Balows, A., W.J. Hausler, K.L. Hermann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

May, B.D. *Corynebacterium ulcerans* infections in monkeys. *Lab Anim Sci* 22:509–513, 1972.

Meers, P.D. A case of classical diphtheria and other infections due to *Corynebacterium ulcerans*. *J Infect* 1:139–142, 1979.

Okewole, P.A., O.S. Odeyemi, E.A. Irokanulo, *et al*. *Corynebacterium diphtheriae* isolated from guinea pigs. *Indian Vet J* 67:579–580, 1990.

Olson, M.E., I. Goemans, D. Bolingbroke, S. Lundberg. Gangrenous dermatitis caused by *Corynebacterium ulcerans* in Richardson ground squirrels. *J Am Vet Med Assoc* 193:367–368, 1988.

Rountree, P.M., H.R. Carne. Human infection with an unusual corynebacterium. *J Pathol Bacteriol* 94:19–27, 1967.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barbough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

Vale, J.A., G.W. Scott. *Corynebacterium bovis* as a cause of human disease. *Lancet* 2:682–684, 1977.

Van Etta, L.L., G.A. Filice, R.M. Ferguson, D.N. Gerding. *Corynebacterium equi*: A review of 12 cases of human infection. *Rev Infect Dis* 5:1012–1018, 1983.

Wiggins, G.L., F.O. Sottnek, G.Y. Hermann. Diphtheria and other corynebacterial infections. *In*: Balows, A., W.J. Hausler, Jr., eds. *Diagnostic Procedures for Bacterial, Mycotic and Parasitic Infections*. 6th ed. Washington, D.C.: American Public Health Association; 1981.

Willet, H.P. *Corynebacterium*. *In*: Joklik, W.K., H.P. Willet, D.B. Amos, eds. *Zinsser Microbiology*. 17th ed. New York: Appleton-Century-Crofts; 1980.

DERMATOPHILOSIS ˡƐǭǂШǅǁƐ ƅƐǭ

ǌþǤǀ ƕĭƳǊǳ ƕĭǅǋǩþШ ƒ ƐþǅǄ ICD-10 A48.8

ICD-10 A48.8 other specified bacterial diseases

·(ȳÅĀȡǂă Ž) ɃøǺÛÅŏă ÆŸƨă āǺȢǬŏă ÛStreptothrichosis ǦÅÅĤÎŏă ğÅÅÆÕĤŏă ŏăấ ˸ğȦąấăÅţă

(*D. dermotononomous* [illegible] *Dermatophilus congolensis* [illegible] .*Actinomycetales* [illegible] *D. Pedis*) [illegible]

[illegible] .zoospores [illegible]

[illegible]

[illegible] 1961 [illegible]

(Keplan 1980; Portugal and [illegible] .Baldassi 1980) [illegible]

[illegible] %90 [illegible] %16 [illegible] %20 [illegible]

[illegible] 14 - 3 [illegible]

(Semispecific

III

(body strike

Lucillia cu prina

.(Gherardi *et al.*, 1981)

foot

rot

[illegible] (1977) [illegible] (Sanders *et al.*, 1990) [illegible] (Koney and Marrow, 1990) [illegible]

[illegible]

[illegible]

[illegible]

(Wright's stain

.(Makinde and Majiyagbe, 1982)

.1% alum dips

700000

70



(Sutherland and Robertson 1988, How *et al*., 1990)

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agriculture Bureau; 1973.

Bida, S.A., S.M. Dennis. Sequential pathological changes in natural and experimental dermatophilosis in Bunaji cattle. *Res Vet Sci* 22:18–22, 1977.

Carter, G.R. *Diagnostic Procedures in Veterinary Microbiology*. 2nd ed. Springfield: Thomas; 1973.

Dean, D.J., M.A. Gordon, C.W. Severinghaus, E.T. Kroll, J.R. Reilly. Streptothricosis: A new zoonotic disease. *N Y State J Med* 61:1283–1287, 1961.

Gherardi, S.G., N. Monzu, S.S. Sutherland, K.G. Johnson, G.M. Robertson. The association between body strike and dermatophilosis of sheep under controlled conditions. *Aust Vet J* 57:268–271, 1981.

Gordon, M.A. The genus *Dermatophilus*. *J Bacteriol* 88:508–522, 1964.

How, S.J., D.H. Lloyd, A.B. Sanders. Vaccination against *Dermatophilus congolensis* infection in ruminants: Prospects for control. *In*: Tcharnev C., R. Halliwell, eds. *Advances in Veterinary Dermatology*. London: Baillière Tindall; 1990.

Kaplan, W. Dermatophilosis in man and lower animals: A review. *In*: *Proceedings of the Fifth International Conference on the Mycoses. Superficial, cutaneous, and subcutaneous infections. Caracas, Venezuela, 27–30 April 1980*. Washington, D.C.: Pan American Health Organization; 1980. (Scientific Publication 396).

Koney, E.B.M., A.N. Morrow. Streptothricosis in cattle on the coastal plains of Ghana: A comparison of the disease in animals reared under two different management systems. *Trop Anim Health Prod* 22:89–94, 1990.

Makinde, A.A., K.A. Majiyagbe. Serodiagnosis of *Dermatophilus congolensis* infection by counterimmunoelectrophoresis. *Res Vet Sci* 33:265–269, 1982.

Pier, A.C. Géneros *Actinomyces, Nocardia y Dermatophilus*. *In*: Merchant, I.A., R.A. Packer. *Bacteriología veterinaria*. 3.ª ed. Zaragoza, España: Acribia; 1970.

Portugal, M.A.C.S., L. Baldassi. A dermatofilose no Brasil. Revisão bibliográfica. *Arq Inst Biol* 47:53–58, 1980.

Roberts, D.S. *Dermatophilus* infection. *Vet Bull* 37:513–521, 1967.

Sanders, A.B., S.J. How, D.H. Lloyd, R. Hill. The effect of energy malnutrition in ruminants on experimental infection with *Dermatophilus congolensis*. *J Comp Pathol* 103:361–368, 1990.

Sutherland, S.S., G.M. Robertson. Vaccination against ovine dermatophilosis. *Vet Microbiol* 18:285–295, 1988.

[illegible]

DISEASES CAUSED BY NONTUBERCULOUS MYCOBACTERIA

[illegible] A 31.1 [illegible] ICD – 10 A31.0

[illegible] A31.8

ICD – 10 A31.0 Pulmonary mycobacterial infection; A 31.1 Cutaneous mycobacterial infection; A31.8 Other mycobacterial infections

[illegible] Mycobacteriosis [illegible]

[illegible] (NTM) [illegible] *Mycobacterium tuberculosis* [illegible] *M.microti* [illegible] *M.africanum* [illegible] *M. bovis* [illegible]

[illegible] 15 [illegible] (MAC) [illegible] (*M. avian – intracellulare*) MAI [illegible] .MAIS (*M. avian – intracellulare – scrofulaceum*) [illegible]

[illegible] *M.paratuberculosis* .(Grange *et al.*, 1990) [illegible]

[illegible] .(Sunderson *et al.*, 1992) [illegible]

[illegible] (*Palumba* [illegible] (*Palumbus*) [illegible]

[illegible] DNA [illegible] (*Palumba Palumbus*) [illegible] 1990 [illegible] DNA [illegible] *M. avium subsp. Avium* [illegible] *M. avium* [illegible] M. *avium subsp paratuberculosis* [illegible] *subsp. silvaticum*

[illegible] (28 – 1) [illegible] 28 [illegible] (MAC) [illegible] Runyon's [illegible] 1 [illegible] 1959 [illegible] 3 [illegible] 2 [illegible] 4 [illegible] (Wayne and Kubica, 1986) [illegible]

[illegible] *M.kansasii* [illegible] *M.szulgai* [illegible] *M.xenopi* [illegible] *M.marinum* [illegible] *M.fortuitum* [illegible] *M.simiae* [illegible] *M.chelonae*

(Wolinsky, 1979)

100.000 4 – 1.7 100.000 1.2 – 0.5 100.000 0.53 – 0.17

(Wolinksky, 1979) 1972 1960

%5.7

(Havlik *et al.*, 1990 – 1989 %23.3 1988 – 1985

727 1992)

%87

11 8 6 1

%50 %3

.(Vakrus and Good, 1990) [illegible]

[illegible] 3· [illegible] 100 [illegible] CD4 + [illegible]
.(Havlik *et al.*, 1992) [illegible]

[illegible] 1988 – 1983 [illegible]
513 [illegible] (HIV) [illegible]
[illegible] 34 [illegible] 23 [illegible] 34 [illegible]
(Debrunner *et* [illegible] 10 [illegible]
.*al.*, 1992)

113 [illegible] 4,894 [illegible] 8,006 [illegible]
([illegible] %0.37) [illegible] 18 [illegible] (%1.4)
[illegible]
[illegible]
[illegible] 16 [illegible]
.(Dilonardo *et al.*, 1983) [illegible]

13544 [illegible] 6 [illegible] 15 [illegible]
[illegible] %99.17 [illegible] 7662 [illegible]
%0.35 [illegible] %0.47 [illegible]
[illegible] 1991 [illegible] 1985 [illegible] .(Barrera Dekantor, 1987)
[illegible] %6.2 [illegible]
HIV [illegible] %0.5 [illegible] HIV [illegible]
.(DiLanardo *et al.,* 1993)

[illegible] 547 [illegible]
[illegible] %89.6 (Bacterioscopy) [illegible]
[illegible] %8.9 [illegible]
[illegible]

.(Thoen *et al*., 1981)

.(Wolinsky, 1979)

[illegible] .(Wolinsky, 1979) [illegible]

[illegible] 5 - [illegible] 18 [illegible]

[illegible]

[illegible] 100000 [illegible] 0.37 [illegible] 10000 [illegible] 0.04 [illegible] .(Grang and Yates) [illegible]

[illegible] .(wolinsky, 1979) [illegible]

[illegible]

[illegible] Photochromogen [illegible] °32 [illegible] .(Sanders *et al.*, 1990) [illegible] °37 [illegible]

[illegible] 290 [illegible] buruli [illegible] Bairnsdale [illegible]

[illegible]

[illegible]

[illegible]

[illegible] (McFadden *et al*., 1987; Thorel 1989; [illegible] Sandesron *et al*., 1992) [illegible]

(Benenson, 1990)

(1993)

(Sanders *et al.*, 1990)

(Thoen *et al.*, 1980)

1977 – 1973 (Theon *et al.*, 1979) %14 2 1 %50 %2.7

xenopi

62 28 18 (Correa and Correa 1973)

paraspecific sensitizction

.(Grange *et al.*, 1990)

^{8} ^{5} ^{4} ^{2} ^{1}

.(Songe *et al.*, 1980)

(Tsukamura *et al.*, porcinum

.1983)

.(Brown *et al.*, 1979)

1988 %73 1976 2.3 .(Dey *et al.*, 1993)

venter

.(White *et al.*, 1983)

10

(Carpenter *et al.*, 1988)

emaciation

(Thoen *et al.*, 1981) epithelioid

44 (*Maccaca arctoides*)

54

.(Holmberg *et al.*, 1985)

koal (*Phascolarctos cinereus*) (Mitchel *et al*., 1981).

aquarium exophtholmos (Leiboritz 1980, Martin 1981).

(*plenrodem cinera and p. marmoratus*) (*Bubalus Bubalis*).

67 41 (%53) 22 *intracellulare* (*chaetophractus villosus*) 206 (De kantor, 1978) (*Daspus hybridus*).

(Resoagli *et al*., 1982).

3 2 1 1 2 (Theon *et al*., 1981) (Grange *et al*., 1990)

Pet

(Gruft *et al.*, 1981)

250 %25

PPD-B (...) PDD-A

.(Kazda, 1983)

11 ... 4 ... 18 ... 3 ... 16

.(Grange *et al.*, 1990 ... du Moulin *et al.*, 1988)

(Wolinsky, 1979)

Wattle

(Thoen and Karlson, 1991)

(Thoen *et al.*, 1981)

(Songer *et al.*, 1980)

Barrera, L., I.N. De Kantor. Nontuberculous mycobacteria and *Mycobacterium bovis* as a cause of human disease in Argentina. *Trop Geogr Med* 39:222–227, 1987.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Blancarte, M., B. Campos, S. Serna Villanueva. Micobacterias atípicas en la República Mexicana. *Salud Publica Mex* 24:329–340, 1982.

Brown, J., M.A. Neuman. Lesions of swine lymph nodes as a diagnostic test to determine mycobacterial infection. *Appl Environ Microbiol* 37:740–743, 1979.

Brown, J., J.W. Tollison. Influence of pork consumption on human infection with *Mycobacterium avium-intracellulare*. *Appl Environ Microbiol* 38:1144–1146, 1979.

Carpenter, J.L., A.M. Myers, M.W. Conner, *et al.* Tuberculosis in five basset hounds. *J Am Vet Med Assoc* 192:1563–1568, 1988.

Correa, C.N., W.M. Correa. Micobacterias isoladas de bovinos e suinos em São Paulo, Brasil. *Arq Inst Biol* 40:205–208, 1973.

Debrunner, M., M. Salfinger, O. Brandli, A. von Graevenitz. Epidemiology and clinical significance of nontuberculous mycobacteria in patients negative for human immunodeficiency virus in Switzerland. *Clin Infect Dis* 15:330–345, 1992.

De Kantor, I.N. Isolation of mycobacteria from two species of armadillos: *Dasypus hybridus* ("mulita") and *Chaetophractus villosus* ("peludo"). *In*: Pan American Health Organization. *The Armadillo as an Experimental Model in Biomedical Research*. Washington, D.C.: PAHO; 1978. (Scientific Publication 366).

Dey, B.P., G.L. Parham. Incidence and economics of tuberculosis in swine slaughtered from 1976 to 1988. *J Am Vet Med Assoc* 203:516–519, 1993.

Di Lonardo, M., J. Benetucci, M. Beltrán, *et al.* La tuberculosis and la infección por VIH/SIDA en Argentina. Un resumen de información. *Respiración* 8:60–62, 1993.

Di Lonardo, M., N.C. Isola, M. Ambroggi, G. Fulladosa, I.N. De Kantor. Enfermedad producida por micobacterias no tuberculosas en Buenos Aires, Argentina. *Bol Oficina Sanit Panam* 95:134–141, 1983.

Du Moulin, et al., 1988. Cited in: Grange, J.M., M.D. Yates, E. Boughton. The avian tubercle bacillus and its relatives. *J Appl Bacteriol* 68:411–431, 1990.

Grange, J.M., M.D. Yates, E. Boughton. The avian tubercle bacillus and its relatives. *J Appl Bacteriol* 68:411–431, 1990.

Gruft, H., J.O. Falkinham III, B.C. Parker. Recent experience in the epidemiology of disease caused by atypical mycobacteria. *Rev Infect Dis* 3:990–996, 1981.

Guthertz, L.S., B. Damsker, E.J. Bottone, *et al. Mycobacterium avium* and *Mycobacterium intracellulare* infections in patients with and without AIDS. *J Infect Dis* 160:1037–1041, 1989.

Havlik, J.A., Jr., C.R. Horsburgh, Jr., B. Metchock, *et al.* Disseminated *Mycobacterium avium* complex infection: Clinical identification and epidemiologic trends. *J Infect Dis* 165:577–580, 1992.

Holmberg, C.A., R. Henrickson, R. Lenninger, *et al.* Immunologic abnormality in a group of *Macaca arctoides* with high mortality due to atypical mycobacterial and other disease processes. *Am J Vet Res* 46:1192–1196, 1985.

Inderlied, C.B., C.A. Kemper, L.E. Bermúdez. The *Mycobacterium avium* complex. *Clin Microbiol Rev* 6:266–310, 1993.

Kazda, J. The principles of the ecology of mycobacteria. *In*: Ratledge C., J.L. Stanford, eds. Vol 2: *The Biology of the Mycobacteria*. London: Academic Press; 1983.

Leibovitz, L. Fish tuberculosis (mycobacteriosis). *J Am Vet Med Assoc* 176:415, 1980.

Martin, A.A. Mycobacteriosis: A brief review of a fish-transmitted zoonosis. *In*: Fowler, M.F., ed. Wildlife Diseases of the Pacific Basin and Other Countries. 4th International Conference of the Wildlife Diseases Association, Sydney, Australia, 1981.

McFadden, J.J., P.D. Butcher, R. Chiodini, J. Hermon-Taylor. Crohn's disease-isolated mycobacteria are identical to *Mycobacterium paratuberculosis*, as determined by DNA probes that distinguish between mycobacterial species. *J Clin Microbiol* 25:796–801, 1987.

Mitchell, P., D. Johnson. The recovery of *Mycobacterium ulcerans* from koalas in east Gippsland. *In*: Fowler, M.F., ed. Wildlife Diseases of the Pacific Basin and Other Countries. 4th International Conference of the Wildlife Diseases Association, Sydney, Australia, 1981.

Resoagli, E., A. Martínez, J.P. Resoagli, S.G. de Millán, M.I.O. de Rott, M. Ramírez. Micobacteriosis natural en armadillos, similar a la lepra humana. *Gac Vet* 44:674–676, 1982.

Runyon, E.H. Anonymous mycobacteria in pulmonary disease. *Med Clin North Am* 43:273–290, 1959.

Sanders, W.E., Jr., E.A. Horowitz. Other *Mycobacterium* species. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Sanderson, J.D., M.T. Moss, M.L. Tizard, J. Hermon-Taylor. *Mycobacterium paratuberculosis* DNA in Crohn's disease tissue. *Gut* 33:890–896, 1992.

Schaefer, W.B. Incidence of the serotypes of *Mycobacterium avium* and atypical mycobacteria in human and animal diseases. *Am Rev Respir Dis* 97:18–23, 1968. Cited in: Wolinsky, E. Non tuberculous mycobacteria and associated diseases. *Am Rev Resp Dis* 119:107–159, 1979.

Songer, J.G., E.J. Bicknell, C.O. Thoen. Epidemiological investigation of swine tuberculosis in Arizona. *Can J Comp Med* 44:115–120, 1980.

Thoen, C.O., E.M. Himes, W.D. Richards, J.L. Jarnagin, R. Harrington, Jr. Bovine tuberculosis in the United States and Puerto Rico: A laboratory summary. *Am J Vet Res* 40:118–120, 1979.

Thoen, C.O., A.G. Karlson. Tuberculosis. *In*: Calnek, B.W., H.J. Barnes, C.W. Beard, W.M. Reid, H.W. Yoder, Jr., eds. *Diseases of Poultry*. 9th ed. Ames: Iowa State University Press; 1991.

Thoen, C.O., A.G. Karlson, E.M. Himes. Mycobacterial infections in animals. *Rev Infect Dis* 3:960–972, 1981.

Thorel, M.F. Relationship between *Mycobacterium avium, M. paratuberculosis* and mycobacteria associated with Crohn's disease. *Ann Rech Vet* 20:417–429, 1989.

Thorel, M.F., M. Krichevsky, V.V. Levy-Frebault. Numerical taxonomy of mycobactin-dependent mycobacteria, emended description of *Mycobacterium avium*, and description of *Mycobacterium avium* subsp. *avium* subsp. nov., *Mycobacterium avium* subsp. *paratubercu-*

losis subsp. nov., and *Mycobacterium avium* subsp. *silvaticum* subsp. nov. *Int J Syst Bacteriol* 40:254–260, 1990.

Tsukamura, M., H. Nemoto, H. Yugi. *Mycobacterium porcinum* sp. nov. A porcine pathogen. *Int J Syst Bacteriol* 33:162–165, 1983.

Wayne, L.G., G.P. Kubica. Family Mycobacteriaceae. *In*: Sneath, P.A., M.S. Mair, M.E. Sharpe. Vol 2: *Bergey's Manual of Systemic Bacteriology*. Baltimore: Williams & Wilkins; 1986.

White, S.D., P.J. Ihrke, A.A. Stannard, C. Cadmus, C. Griffin, S.A. Kruth, *et al.* Cutaneous atypical mycobacteriosis in cats. *J Am Vet Med Assoc* 182:1218–1222, 1983.

Wolinsky, E. Nontuberculous mycobacteria and associated diseases. *Am Rev Resp Dis* 119:107–159, 1979.

Yakrus, M.A., R.C. Good. Geographic distribution, frequency, and specimen source of *Mycobacterium avium* complex serotypes isolated from patients with acquired immunodeficiency syndrome. *J Clin Microbiol* 28:926–929, 1990.

O1

DISEASES IN MAN AND ANIMALS CAUSED BY NON-O1 *VIBRO CHOLERAE*

O1 **ICD 10 A00.0**

ICD 10 A00.0 cholera due to *Vibrio cholerae* O1, biovar cholere

vibro cholerae 0.4 1.5 01 O1 O1

O O1 O1 O1 1993 (NAGs) nonagglutinable O1

.(WHO, 1993) O139

[illegible] 1992 [illegible] O139 [illegible] (Das *et al*., 1993) O139 [illegible] (Nair and Takeda, 1993) [illegible] (Das *et al*., 1993) [illegible]

[illegible] O1 [illegible] El Tor [illegible] 1958 [illegible] ogawa [illegible] polyvalent [illegible] O1 [illegible] O1 [illegible] O1 [illegible] Inhab [illegible] (Benenson, 1991) [illegible]

[illegible] Serovars [illegible] O1 [illegible] (Smith, 1977) [illegible] 70 [illegible]

[illegible] O1 [illegible] O139 [illegible]

[illegible] O1 [illegible]

[illegible] (O1 [illegible] 1968 [illegible] (Kamal, 1971) [illegible] 31 [illegible] 544 [illegible] 56 [illegible] 100 [illegible] 56 [illegible] 42 [illegible] vehicle [illegible] (Aldova *et al.*, 1968) (Dakin *et* [illegible] asparagus [illegible] *al.*, 1974) [illegible]

[illegible] O139 [illegible] O1 [illegible] (WHO, 1993) [illegible] %5 [illegible]

[illegible] O1 [illegible] 500 [illegible] %14 [illegible] (Sack, 1993) (Raven [illegible] 195 [illegible] 8 [illegible] 54 [illegible] 01 [illegible] O1 [illegible] 46 [illegible] 01 [illegible] (Sangal *et al.*, 1974) [illegible]

[illegible] (Morris, 90) [illegible] %93 [illegible] %25 [illegible] %100 [illegible] 14 [illegible] 8 [illegible] %21 [illegible] %71 [illegible] (Morris, 1990) [illegible] (Girouard *et al*., 1992) [illegible] (Morris *et al.*, 1990) [illegible] 5.397 [illegible] 40 [illegible] %7 [illegible] (%20.8) [illegible] O1 [illegible] (%11.9) [illegible] (%5) [illegible]

[illegible] O1 [illegible] O1 [illegible] %60 [illegible] (Morris, 1990) [illegible] O1 [illegible] Sepsis [illegible] O1 [illegible] (Sologa *et al*., 1991) [illegible] O139 [illegible] O1 [illegible]

[illegible] O1 [illegible] O139 [illegible] O139 [illegible] O1 [illegible]

[illegible]

[illegible] O1 [illegible] O139 [illegible]

[illegible] 7 [illegible] 3 [illegible] (*Bison Bison* [illegible]) [illegible] 100 [illegible] alromasum [illegible] O1 [illegible] .(Rhodes *et al*., 1985) [illegible] 17) [illegible] (1986) [illegible] .O1 [illegible] 16 [illegible] 800 [illegible] %20 [illegible] .%50 [illegible] .(Fain Binda *et al*., 1986) [illegible] 01 [illegible]

[illegible] O1 [illegible]

(Corrales *et al.*, 1989)

(Morris, 1990)

(Zafari *et al.*, 1973) 790 %14

01

(Twedt *et al.*, 1981)

vehicle

%16 (Kamal, 1971) 1968

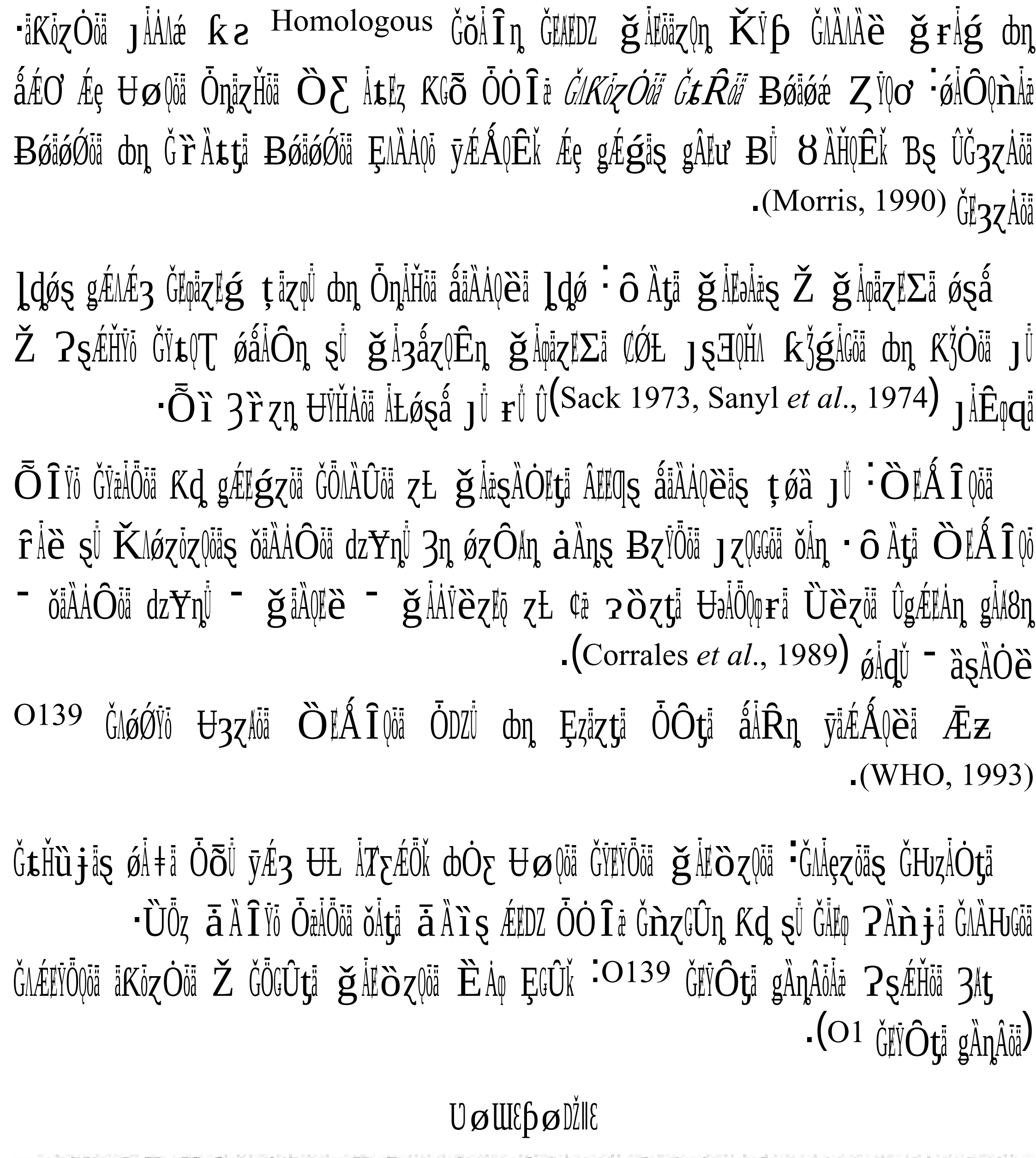
(Taylor *et al.*, 1988) 01

01

adherence

Thermostable

01 44 9 01 237 %2



Aldová, E., K. Laznickova, E. Stepankova, J. Lietava. Isolation of nonagglutinable vibrios from an enteritis outbreak in Czechoslovakia. *J Infect Dis* 118:25–31, 1968. Cited in: Morris, J.G., Jr. Non-O group 1 *Vibrio cholerae*: A look at the epidemiology of an occasional pathogen. *Epidemiol Rev* 12:179–191, 1990.

Benenson, A.S. Cholera. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infections of Humans*. 2nd ed. New York: Plenum Medical Book Co.; 1991.

Corrales, M.T., G.B. Fronchkowsky, T. Eiguer. Aislamiento en Argentina de *Vibrio cholerae* no O1 en líquidos cloacales. *Rev Argent Microbiol* 21:71–77, 1989.

Dakin, W.P., D.J. Howell, R.G. Sutton, *et al.* Gastroenteritis due to non-agglutinable (non-cholera) vibrios. *Med J Aust* 2:487–490, 1974. Cited in: Morris, J.G., Jr. Non-O group 1 *Vibrio cholerae*: A look at the epidemiology of an occasional pathogen. *Epidemiol Rev* 12:179–191, 1990.

Das, B., R.K. Ghosh, C. Sharma, *et al.* Tandem repeats of cholera toxin gene in *Vibrio cholerae* O139. *Lancet* 342(8880):1173–1174, 1993.

Fain Binda, J.C., E.R. Comba, H. Sánchez, *et al.* Primer aislamiento de *Vibrio cholerae* no O1 en la Argentina de una enteritis bovina. *Rev Med Vet* 67:203–207, 1986.

Girouard, Y., C. Gaudreau, G. Frechette, M. Lorange-Rodriques. Non-O1 *Vibrio cholerae* enterocolitis in Quebec tourists returning from the Dominican Republic. *Can Commun Dis Rep* 18:105–107, 1992.

Kamal, A.M. Outbreak of gastroenteritis by nonagglutinable (NAG) vibrios in the Republic of the Sudan. *J Egypt Public Health Assoc* 46:125–173, 1971. Cited in: Benenson, A.S. Cholera. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infections of Humans*. 2nd ed. New York: Plenum Medical Book Co.; 1991.

Kaper, J., H. Lockman, R.R. Colwell, S.W. Joseph. Ecology, serology, and enterotoxin production of *Vibrio cholerae* in Chesapeake Bay. *Appl Environ Microbiol* 37:91–103, 1979.

Morris, J.G., Jr. Non-O group 1 *Vibrio cholerae*: A look at the epidemiology of an occasional pathogen. *Epidemiol Rev* 12:179–191, 1990.

Morris, J.G., Jr., T. Takeda, B.D. Tall, *et al.* Experimental non-O group 1 *Vibrio cholerae* gastroenteritis in humans. *J Clin Invest* 85:697–705, 1990.

Nair, G.B., Y. Takeda. *Vibrio cholerae* in disguise: A disturbing entity. *Wld J Microbiol Biotech* 9:399–400, 1993.

Rhodes, J.B., D. Schweitzer, J.E. Ogg. Isolation of non-O1 *Vibrio cholerae* associated with enteric disease of herbivores in western Colorado. *J Clin Microbiol* 22:572–575, 1985.

Rhodes, J.B., H.L. Smith, Jr., J.E. Ogg. Isolation of non-O1 *Vibrio cholerae* serovars from surface waters in western Colorado. *Appl Environ Microbiol* 51:1216–1219, 1986.

Sack, R.B. A search for canine carriers of *Vibrio*. *J Infect Dis* 127:709–712, 1973.

Sanyal, S.C., S.J. Singh, I.C. Tiwari, *et al.* Role of household animals in maintenance of cholera infection in a community. *J Infect Dis* 130:575–579, 1974.

Smith, H.L. Serotyping of non-cholera vibrios. *J Clin Microbiol* 30:279–282, 1977.

Soloaga, R., G. Martínez, A. Cattani, *et al.* Peritonitis bacteriana espontánea y sepsis por *Vibrio cholerae* no O1. *Infect Microbiol Clin* 3:58–62, 1991.

Taylor, D.N., P. Echeverría, C. Pitarangsi, *et al.* Application of DNA hybridization techniques in the assessment of diarrheal disease among refugees in Thailand. *Am J Epidemiol* 127:179–187, 1988. Cited in: Morris, J.G., Jr. Non-O group 1 *Vibrio cholerae*: A look at the epidemiology of an occasional pathogen. *Epidemiol Rev* 12:179–191, 1990.

Twedt, R.M., J.M. Madden, J.M. Hunt, *et al.* Characterization of *Vibrio cholerae* isolated from oysters. *Appl Environ Microbiol* 41:1475–1478, 1981.

World Health Organization (WHO). Epidemic diarrhoea due to *Vibrio cholerae* non-O1. *Wkly Epidemiol Rec* 68(20):141–142, 1993.

Zafari, Y., S. Rahmanzadeh, A.Z. Zarifi, N. Fakhar. Diarrhoea caused by non-agglutinable *Vibrio cholerae* (non-cholera Vibrio). *Lancet* 2:429–430, 1973. Cited in: Morris, J.G., Jr. Non-O group 1 *Vibrio cholerae*: A look at the epidemiology of an occasional pathogen. *Epidemiol Rev* 12:179–191, 1990.

ENTEROCOLITIC DžŇǰǁŇǰѣǁŇǰ ĂyDžǂǁ ƙǦŇǂDžǁɛ ǀƑĭǚƨβĭǁɛ ƀɛǫ YERSINIOSIS

***DžŇǰǁŇǰѣǁŇǰ ĂyDžǂǁ ƙǦŇǂDžǁɛ ƙĭǚƨβĭǁɛ DžY !ɯFǚǁɛ ƀƑyDžǙɛ ƒƑŃǂǁɛ* ICD 10 A04.6**

ICD 10 A04.6 enteritis due to *Yersinia enterocolitica*

ȳǎÀȣǒǎ ǦĿǦŸè Coccobacillus ǥǿƺÔʒ ʝƺǐƺÕǎʂ ʔȞŧǏǒ ǦǦŤŸţǎ ǦĿÀèKǎ ˙ğÅĿǦǦÊǒǎ

Enterobacteriaceae ... 25° ...

... 7 ...

Y.aldovae Y.bercovieri, Y.frederiksenii, Y.intermedia, Y.mollaretii, ...

... *Y.kristensenii, Y.rohdei*

... (Farmer & Kelly 1991) ...

... O ...

... 50 ...

4 ... O: 3 ... Ribotyping ...

... II ... I ... O: 3 ... Clones ...

... I ...

(Blumberg *et al.*, 1991) ... IV ... II

... 50 – 40 ...

... 37° ... W ... V ...

... (Riley & Toma 1989) Aesculin ...

... 4 ... Cohort ...

... %6 ...

... O: 3 ...

(Morris *et al.*, 1991)

[illegible] .(Swaminathan *et al.*, 1982) [illegible] 30 [illegible] 5 [illegible] 27، 9، 5، 3 [illegible] 8 [illegible] 21، 20، 18، 13، 8 [illegible] 8 [illegible] .(Carniel & Mollaret, 1990) [illegible] .(Trimnell & Adesiyn, 1988)

[illegible] 1972 [illegible] 3 [illegible] O: 3 [illegible] 1979 [illegible] %11 [illegible] 1988 [illegible] 1986 [illegible] .(Bissett *et al.*, 1990) [illegible] O: 3 [illegible] .(Lee *et al.*, 1991) [illegible]

[illegible] 1978، 1963 [illegible] 3.167 [illegible] %84 [illegible] .(de Groote *et al.*, 1982) [illegible] 9 [illegible] 3 [illegible] 1000 [illegible] :1977 – 1966 [illegible] %31 [illegible] %1 [illegible] .8 [illegible] 68 [illegible] :1976 – 1973 [illegible]

(Mata & Simhon 1982)

1972 ... 544 ... 198 ... 189 ... 128 ... 1976 ... 1982 ... 13 ... 172 ... 18 ... 94 ... 1973 ... (Tacket *et al.*, 1984)

(Lingholm & Viaskorpi, 1991)

1989 – 1984 ... 51 ... 12 - 6 ... 19 - 16 ... %62 ... (Franco – Vicario *et al.*, 1991)

(Cover & Aber, 1989) ... 1990 ... 1989 ... 38 ... 3 ... 20 ... 4841 ... (%0.78) ... 38

(%1.24) [illegible] (%1.01) [illegible] 80 [illegible] .(Lee *et al.*, 91) (%2.02) [illegible] .(Constantinu *et al.*, 1992)

[illegible] 5 [illegible] 12 [illegible]

[illegible] 3 [illegible] 9 [illegible] .(Hurvell, 1982) [illegible] 5 [illegible] %62.5 [illegible] %5 [illegible] %3 [illegible] .(de Groote *et al.*, 1982) [illegible]

[illegible] %5 [illegible] 14 – 3 [illegible] 2 - 1 [illegible] 4 [illegible] %80 [illegible] 100 [illegible]

1700 %86 %1 %10 .(Swaminathan *et al.*, 1982)

1982 172 %14 %86 (%22.2) (%41.4) (%82.7) (%86.3) (%92.7) (%15.1) (%19.7) (%22.2) .(Tacket *et al.*, 1984) 3

%34 .(Marasco *et al.*, 1993) (%50 23 35

1983 – 1974 458 200 184 10 36 45 14 4 56 43 iletio 28 38 22 16 .(Saebo & Lessen 1992 a + b)

.(Benenson, 1992)

.(Lee *et al.*, 1991)

Chinchilla

(3 1

2 hares

(5

%26 %0.3

.(Zanora *et al.*, 79) 305 %4

(*Urocyon* 0: 8

(*Erethizon* porcupine *cinereoargenteus*)

0: 3 .*dorsatum*)

.(Shayegani *et al.*, 1986)

%5.7 ... %17 ...

(Hurvell, 1981)

(Tayler, 1992)

(Fukushima *et al.*, 1983) ... %100

14 ... (3 ... 2 ...)

(Philbey *et al.*, 1991)

7 ... 30 ... 6

O: 6.30 ... (Corbel *et al.*, 1990)

90

(Corbel *et al.*, 1992)

(Das *et al.*, 86)

(Kaneko *et al.*, 451 %5.5

(Pederson & Winblad 1979) 115 %1.7 1977)

(Papageoges & Gosselin, 1983)

0: 9 0: 8

(Erythrocebus patas) Patas

20

(Skavlen *et al.*, 1985) 5

(10

.(Wooley *et al.*, 1980 , Brewer & Corbel, 1983)

:10



95 2

8

(Aldova *et* *al.*, 1981)

1987 1990

15 8

66 18 5

5

.(Cannon and Linnemann, 1992)

0: 3 ... 2000 ... (%80 ... 0: 3 ... 0: 3 ... 360 ... 0: 3 ... 1458 ... (%24.7) ... %26.3 ... %2.2 ... %1 ... 0: 8 ... 0: 5.27 ... 0: 3 ... (Andersen, 1988)

146 ... %10 ... %19 ... 0: 3 ... 120 ... 31 ... Controls ... (Merilahti - Palo *et al*., 1991) 0:3 ... 117 ... %9.9 ... 316 ... (%11.1) 25 ... 803 ... 0: 3 ... G ... (%15.2) ... (Nesbakken *et al*., 1991)

1981 ... 1976 ... 1000 ... 239 ... (0: 13b, 0: 13 a)

%75 ... 0: 3 ...

.(Thompson and Gravel, 1986)

(Schiomonn, ... .1989)

10 ... 1991 ... 1987 ... 50 ... 37 ... 12 ... 6 ... 4 ... 10 ... 0: 3 ... 4) O: 5.27 ... (CDC, 91) ... O: 20 ... 30 ... 4 ... 4 ... 1988 ... 6 ... 27 ... (Prentice 1992, Jones *et al*., 1993) ... 17 ...

.(Richards *et al*., 1992) autologous ...

1982 ...

(CIN)

80/1 40/1

(Schiemenn, 1989)

9 ... 9 ... 9 ... 9 ... (Mittal *et al.*, 1984)

3 ... .(Paerregaad *et al.*, 1991)

500 ... (PCR) ... .(Feng *et al.*, 1992) ... 100

... 25 ... (CFU) ...

ǦǫʐȮŋ ǥÆǥȿ $^{8}10 - ^{7}10$ БǗ ȜÀǩÀʌ %26 ȳʐǭȍă Ž ǬǭăÀƨă ắăÆȞǩ ɿǖʐ ɿʐȯʐǬȍăȿ ʔȞȶǗȍ

.(CDC 1991) ǞǯǮǗ ȿǗ ɄǗǹăÆȍă ɿÀʌØȍă ȡŋ Ȭŋ/ȳăÀȡʐǫÀǫă 1 Ȥ ȊǫȮʌ ǥÀȶȞǫÊȶǗȍ

ǗøɮƐþøǱƖƐ

Aldova, E., J. Sobotková, A. Brezinova, J. Cerna, M. Janeckova, J. Pegrimkova, *et al.* *Yersinia enterocolitica* in water and foods. *Zbl Bakt Mikrobiol Hyg [B]* 173:464–470, 1981.

Andersen, J.K. Contamination of freshly slaughtered pig carcasses with human pathogenic *Yersinia enterocolitica*. *Int J Food Microbiol* 7:193–202, 1988.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bissett, M.L., C. Powers, S.L. Abbott, J.M. Janda. Epidemiologic investigations of *Yersinia enterocolitica* and related species: Sources, frequency and serogroup distribution. *J Clin Microbiol* 28:910–912, 1990.

Blumberg, H.M., J.A. Kiehlbauch, I.K. Wachsmuth. Molecular epidemiology of *Yersinia enterocolitica* O:3 infections: Use of chromosomal DNA restriction fragment length polymorphisms of rRNA genes. *J Clin Microbiol* 29:2368–2374, 1991.

Brewer, R.A., M.J. Corbel. Characterization of *Yersinia enterocolitica* strains isolated from cattle, sheep and pigs in the United Kingdom. *J Hyg* 90:425–433, 1983.

Cannon, C.G., C.C. Linnemann. *Yersinia enterocolitica* infections in hospitalized patients: The problem of hospital-acquired infections. *Infect Control Hosp Epidemiol* 13:139–143, 1992.

Carniel, E., H.H Mollaret. Yersiniosis. *Comp Immunol Microbiol Infect Dis* 13(2):51–58, 1990.

Constantiniu, S., C. Naciu, A. Romaniuc, *et al.* Serological diagnosis in human *Yersinia* infections. *Roum Arch Microbiol Immunol* 51:225–232, 1992.

Corbel, M.J., R.A. Brewer, D. Hunter. Characterisation of *Yersinia enterocolitica* strains associated with ovine abortion. *Vet Rec* 127:526–527, 1990.

Corbel, M.J., B. Ellis, C. Richardson, R. Bradley. Experimental *Yersinia enterocolitica* placentitis in sheep. *Brit Vet J* 148:339–349, 1992.

Cover, T.L., R.C. Aber. *Yersinia enterocolitica*. *N Engl J Med* 321:16–24, 1989.

Das, A.M., V.L. Paranjape, S. Winblad. *Yersinia enterocolitica* associated with third trimester abortion in buffaloes. *Trop Anim Health Prod* 18:109–112, 1986.

de Groote, G., J. Vandepitte, G. Wauters. Surveillance of human *Yersinia enterocolitica* infections in Belgium: 1963–1978. *J Infect* 4:189–197, 1982.

Farmer, J.J., III., M.T. Kelly. Enterobacteriaceae. *In*: Ballows, A., W.J. Hausler, Jr., K.L. Hermann, H.D. Isenberg, H.J. Shadomy. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Feng, P., S.P. Keasler, W.E. Hill. Direct identification of *Yersinia enterocolitica* in blood by polymerase chain reaction amplification. *Transfusion* 32:850–854, 1992.

Franco-Vicario, R., P. Echevarria Villegas, P. Martinez-Olaizola, *et al.* Yersiniosis en un hospital general del Pais Vasco (1984–1989). Aspectos clinicos and epidemiológicos. *Med Clin* 97:241–244, 1991.

Fukushima, H., R. Nakamura, Y. Ito, K. Saito, M. Tsubokura, K. Otsuki. Ecological studies of *Yersinia enterocolitica*. I. Dissemination of *Y. enterocolitica* in pigs. *Vet Microbiol* 8:469–483, 1983.

Hurvell, B. Zoonotic *Yersinia enterocolitica* infection: Host-range, clinical manifestations, and transmission between animals and man. *In*: Bottone, E.J., ed. *Yersinia enterocolitica*. Boca Raton: CRC Press; 1981.

Jones, B.L., M.H. Saw, M.F. Hanson, *et al. Yersinia enterocolitica* septicaemia from transfusion of red cell concentrate stored for 16 days. *J Clin Pathol* 46:477–478, 1993.

Kaneko, K., S. Hamada, E. Kato. Ocurrence of *Yersinia enterocolitica* in dogs. *Jpn J Vet Sci* 39:407–414, 1977.

Lee, L.A., J. Taylor, G.P. Carter, *et al. Yersinia enterocolitica* O:3: An emerging cause of pediatric gastroenteritis in the United States. The *Yersinia enterocolitica* Collaborative Study Group. *J Infect Dis* 163:660–663, 1991.

Lindholm, H., R. Visakorpi. Late complications after a *Yersinia enterocolitica* epidemic: A follow up study. *Ann Rheum Dis* 50:694–696, 1991.

Marasco, W.J., E.K. Fishman, J.E. Kuhlman, R.H. Hruban. Splenic abscess as a complication of septic yersinia: CT evaluation. *Clin Imaging* 17:33–35, 1993.

Mata, L., A. Simhon. Enteritis y colitis infecciosas del hombre. *Adel Microbiol Enf Infec* (Buenos Aires) 1:1–50, 1982.

Merilahti-Palo, R., R. Lahesmaa, K. Granfors, *et al.* Risk of *Yersinia* infection among butchers. *Scand J Infect Dis* 23:55–61, 1991.

Mittal, K.R., I.R. Tizard, D.A. Barnum. Serological cross-reactions between *Brucella abortus* and *Yersinia enterocolitica* 09. International Symposium on Human and Animal Brucellosis. Taipei, Taiwan, 1984.

Morris, J.G., V. Prado, C. Ferreccio, *et al. Yersinia enterocolitica* isolated from two cohorts of young children in Santiago, Chile: Incidence of and lack of correlation between illness and proposed virulence factors. *J Clin Microbiol* 29:2784–2788, 1991.

Nesbakken, T., G. Kapperud, J. Lassen, E. Skjerve. *Yersinia enterocolitica* O:3 antibodies in slaughterhouse employees, veterinarians, and military recruits. Occupational exposure to pigs as a risk factor for yersiniosis. *Contr Microbiol Immunol* 12:32–39, 1991.

Paerregaard, A., G.H. Shand, K. Gaarslev, F. Espersen. Comparison of crossed immunoelectrophoresis, enzyme-linked immunosorbent assays, and tube agglutination for serodiagnosis of *Yersinia enterocolitica* serotype O:3 infection. *J Clin Microbiol* 29:302–309, 1991.

Papageorges, M., R. Higgins, Y. Gosselin. *Yersinia enterocolitica* enteritis in two dogs. *J Am Vet Med Assoc* 182:618–619, 1983.

Pedersen, K.B., S. Winblad. Studies on *Yersinia enterocolitica* isolated from swine and dogs. *Acta Path Microbiol Scand [B]* 87B:137–140, 1979.

Philbey, A.W., J.R. Glastonbury, I.J. Links, L.M. Mathews. *Yersinia* species isolated from sheep with enterocolitis. *Aust Vet J* 68:108–110, 1991.

Prentice, M. Transfusing *Yersinia enterocolitica*. *Brit Med J* 305:663–664, 1992.

Richards, C., J. Kolins, C.D. Trindade. Autologous transfusion-transmitted *Yersinia enterocolitica* [letter]. *JAMA* 268:154, 1992.

Riley, G., S. Toma. Detection of pathogenic *Yersinia enterocolitica* by using Congo red-magnesium oxalate agar medium. *J Clin Microbiol* 27:213–214, 1989.

Saebo, A., J. Lassen. Acute and chronic liver disease associated with *Yersinia enterocolitica* infection: A Norwegian 10-year follow-up study of 458 hospitalized patients. *J Intern Med* 231:531–535, 1992a.

Saebo, A., J. Lassen. Acute and chronic pancreatic disease associated with *Yersinia enterocolitica* infection: A Norwegian 10-year follow-up study of 458 hospitalized patients. *J Intern Med* 231:537–541, 1992b.

Schiemann, D.A. *Yersinia enterocolitica* and *Yersinia pseudotuberculosis*. *In*: Doyle, M.P., ed. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker, 1989.

Shayegani, M., W.B. Stone, I. DeForge, *et al. Yersinia enterocolitica* and related species isolated from wildlife in New York State. *Appl Environ Microbiol* 52:420–424, 1986.

Skavlen, P.A., H.F. Stills, E.K. Steffan, C.C. Middleton. Naturally ocurring *Yersinia enterocolitica* septicemia in patas monkeys (*Erythrocebus patas*). *Lab Anim Sci* 35:488–490, 1985.

Swaminathan, B., M.C. Harmon, I.J. Mehlman. *Yersinia enterocolitica*. *J Appl Bacteriol* 52:151–183, 1982.

Tacket, C.O., J.P. Narain, R. Sattin, J.P. Lofgren, C. Konigsberg, R.C. Rendtorff, *et al.* A multistate outbreak of infections caused by *Yersinia enterocolitica* transmitted by pasteurized milk. *J Am Med Assoc* 251:483–486, 1984.

Taylor, D.J. Infection with *Yersinia*. *In:* Leman, A.D., B.E. Straw, W.L. Mengeling, S. D'Allaire, D.J. Taylor, eds. *Diseases of Swine*. 7th ed. Ames: Iowa State University Press; 1992.

Thompson, J.S., M.J. Gravel. Family outbreak of gastroenteritis due to *Yersinia enterocolitica* serotype O:3 from well water. *Can J Microbiol* 32:700–701, 1986.

Trimnell, A.R., A.A. Adesiyun. Characteristics of the first isolate of *Yersinia enterocolitica* serogroup O:8 from a dog in Nigeria. *Isr J Vet Med* 44:244–247, 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Update: *Yersinia enterocolitica* bacteremia and endotoxin shock associated with red blood cell transfusions—United States, 1991. *MMWR Morb Mortal Wkly Rep* 40(11):176–178, 1991.

WHO Scientific Working Group. Enteric infections due to *Campylobacter*, *Yersinia*, *Salmonella*, and *Shigella*. *Bull World Health Organ* 58:519–537, 1980.

Wooley, R.E., E.B. Shotts, J.W. McConnell. Isolation of *Yersinia enterocolitica* from selected animal species. *Am J Vet Res* 41:1667–1668, 1980.

Zamora, J., O. Alonso, E. Chahuán. Isolement et caracterisation de *Yersinia enterocolitica* chez les rongeurs sauvages du Chili. *Zentralbl Veterinarmed [B]* 26:392–396, 1979.

ENTEROCLITIS DUE TO *CLOSTRIDIUM DIFFICLIE*

ICD10A04.7

Clostridium dufficile .subterminal 1.9 – 0.5 16 - 3 .Broth 6 - 2 B A B Hamster A (Cato *et al.*, 1986)

SDS-PAGE

autoradiography

15 radiomarkas

(Tabaqchali, 1990)

Cytotoxigenic

(Cato *et al.*, 1986)

(Levett, 1986)

(Lyerly *et al.*, 1988)

%25 %90

29 (%39.5) 81 32

(%52) 15

6 20 15

14

%71.4 %50 .(Riley *et al*., 1991)

.(Limonta *et al*., 1989)

Load %50 – 40

B A

.(Hyperly *et al*., 1988)

(Adler *et al*., .1981)

.(Limonta *et al*., 1989) %3

(1800)

.(Lyrele *et al*., 1988) %10

.(George, 1984)

[illegible] %20 [illegible] .(Lyerly *et al.*, 1988) [illegible] .Teicoplanin [illegible] 25 [illegible] %96.2 [illegible] 20 [illegible] %100 [illegible] (%7.7) [illegible] (%25) [illegible] .(de lalla *et al.*, 1992) [illegible]

[illegible]

[illegible] 7 [illegible] 30 - 20 [illegible] (Stallion [illegible]) [illegible] 5 [illegible] .(Raisbeck *et al.*, 1981) [illegible] 15 [illegible]

[illegible] 5 - 2 [illegible] (%63) [illegible] 43 [illegible] 27 [illegible] %65 [illegible] .(Jones *et al.*, 1987) [illegible]

[illegible] .Sordelli [illegible] C B [illegible] Perfrinques [illegible] .(Jones *et al.*, 1993) [illegible] .(Perrin *et al.*, 1993) [illegible] /1993/ [illegible] .(Berry and Levett, 1986) [illegible]

[illegible] %25 [illegible] 40 [illegible] 130 [illegible] .(Thilsted *et al.*, 1981) [illegible]

[illegible] (*Mesecricetus auratus*) [illegible] .Model [illegible] (Rehg and lu, 1992) [illegible] (Chang & Rohwer 1991, Ryden *et al.,* 1991)

[illegible] 400 [illegible] 123 [illegible] .Deficient [illegible]

[illegible]

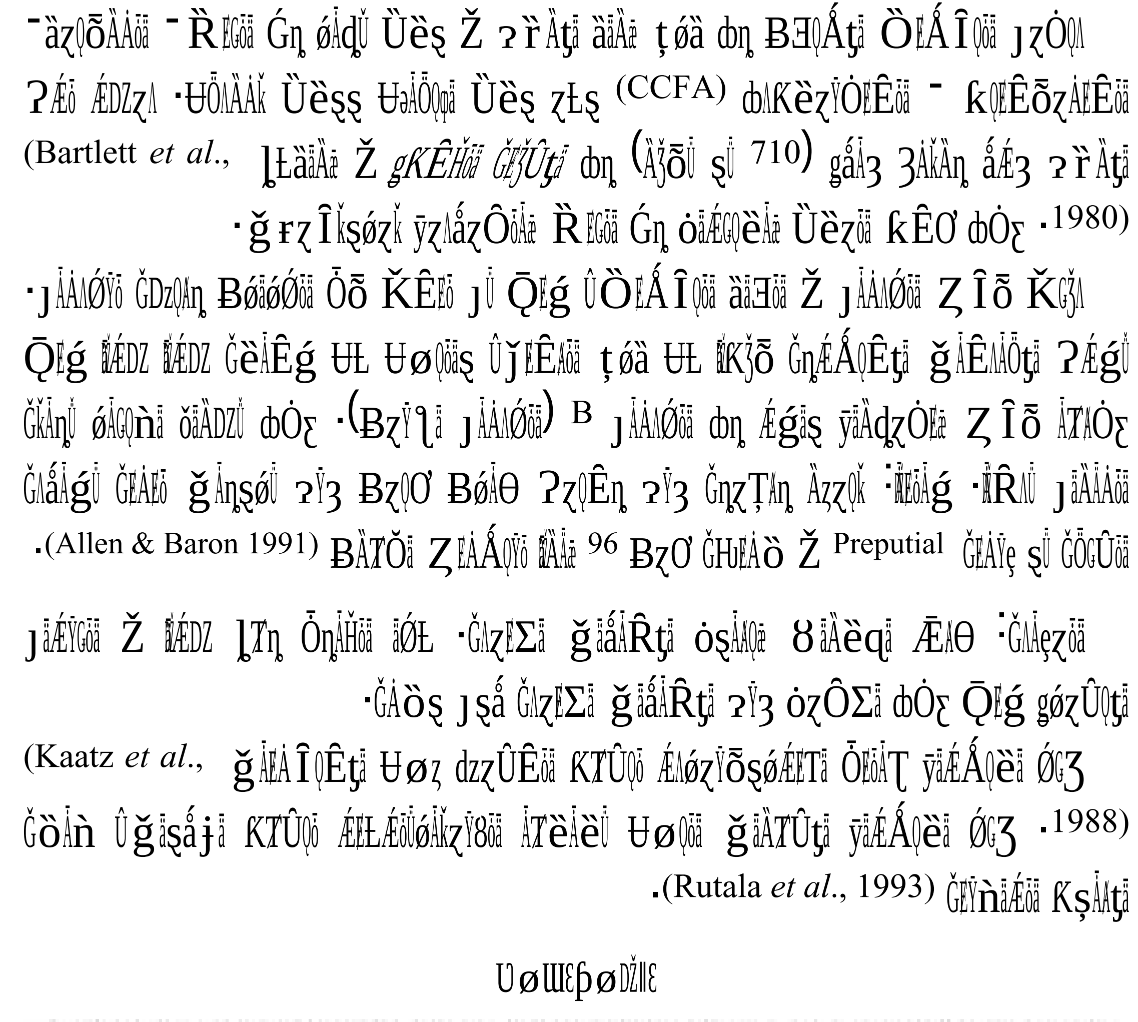
%63.6 %19.4 .(Ithoh *et al.*, 1986)

.(Berry and Levett 1986, Weber *et al.*, 1989, Riley *et al.*, 1991)

%31.4 .(Kaatz *et al.*, 1988)

.(Tabaqchali, 1990) 49 100 .(%20.4) (%2) 98 12 %12.2 .(Rudenoky *et al.*, 1993)

(Lyerly *et al.*, 1988)



Adler, S.P., T. Chandrika, W.F. Berman. *Clostridium difficile* associated with pseudomembranous colitis. Occurence in a 12 week-old infant without prior antibiotic therapy. *Am J Dis Child* 135:820–822, 1981.

Allen, S.D., E.J. Baron. *Clostridium*. *In*: Ballows, A., W.J. Hausler, K.L. Hermann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Bartlett, J.G., N.S. Taylor, T. Chang, J. Dzink. Clinical and laboratory observations in *Clostridium difficile* colitis. *Am J Clin Nutr* 33:2521–2526, 1980.

Berry, A.P., P.N. Levett. Chronic diarrhoea in dogs associated with *Clostridium difficile*. *Vet Rec* 118:102–103, 1986.

Boot, R., A.F. Angulo, H.C. Walvoort. *Clostridium difficile*-associated typhlitis in specific pathogen free guineapigs in the absence of antimicrobial treatment. *Lab Anim* 23:203–207, 1989.

Cato, E.P., W.L. George, S.M. Finegold. Genus *Clostridium* Prazmowski 1880. *In*: Sneath, P.H.A., N.S. Mair, M.E. Sharpe, J.G. Holt. Vol 2: *Bergey's Manual of Systemic Bacteriology*. Baltimore: Williams & Wilkins; 1986.

Chang, J., R.G. Rohwer. *Clostridium difficile* infection in adult hamsters. *Lab Anim Sci* 41:548–552, 1991.

de Lalla, F., R. Nicolin, E. Rinaldi, *et al.* Prospective study of oral teicoplanin versus oral vancomycin for therapy of pseudomembranous colitis and *Clostridium difficile*-associated diarrhea. *Antimicrob Agents Chemother* 36:2192–2196, 1992.

George, W.L. Antimicrobial agent-associated colitis and diarrhea: Historical background and clinical aspects. *Rev Infect Dis* 6(Suppl 1):S208–S213, 1984.

Itoh, K., W.K. Lee, H. Kawamura, *et al.* Isolation of *Clostridium difficile* from various colonies of laboratory mice. *Lab Anim* 20:266–270, 1986.

Jones, R.L., W.S. Adney, A.F. Alexander, *et al.* Hemorrhagic necrotizing enterocolitis associated with *Clostridium difficile* infection in four foals. *J Am Vet Med Assoc* 193:76–79, 1988.

Jones, R.L., W.S. Adney, R.K. Shidaler. Isolation of *Clostridium difficile* and detection of cytotoxin in the feces of diarrheic foals in the absence of antimicrobial treatment. *J Clin Microbiol* 25:1225–1227, 1987.

Kaatz, G.W., S.D. Gitlin, D.R. Schaberg, *et al.* Acquisition of *Clostridium difficile* from the hospital environment. *Am J Epidemiol* 127:1289–1294, 1988.

Limonta, M., A. Arosio, D. Salvioni, A. De Carli. Due casi di artralgia associati ad infezione da *Clostridium difficile*. *Boll Ist Sieroter Milan* 68:142–144, 1989.

Levett, P.N. *Clostridium difficile* in habitats other than the human gastrointestinal tract. *J Infect* 12:253–263, 1986.

Lyerly, D.M., H.C. Krivan, T.D. Wilkins. *Clostridium difficile*: Its disease and toxins. *Clin Microbiol Rev* 1:1–18, 1988.

Perrin, J., I. Cosmetatos, A. Galluser, *et al.* *Clostridium difficile* associated with typhlocolitis in an adult horse. *J Vet Diagn Invest* 5:99–101, 1993.

Raisbeck, M.F., G.R. Holt, G.D. Osweiler. Lincomycin-associated colitis in horses. *J Am Vet Med Assoc* 179:362–363, 1981.

Rehg, J.E., Y.S. Lu. *Clostridium difficile* typhlitis in hamsters not associated with antibiotic therapy. *J Am Med Vet Assoc* 181:1422–1423, 1982.

Riley, T.V., J.E. Adams, G.L. O'Neill, R.A. Bowman. Gastrointestinal carriage of *Clostridium difficile* in cats and dogs attending veterinary clinics. *Epidemiol Infect* 107:659–665, 1991.

Rudensky, B., S. Rosner, M. Sonnenblick, *et al.* The prevalence and nosocomial acquisition of *Clostridium difficile* in elderly hospitalized patients. *Postgrad Med J* 69:45–47, 1993.

Rutala, W.A., M.F. Gergen, D.J. Weber. Inactivation of *Clostridium difficile* spores by disinfectants. *Infect Control Hosp Epidemiol* 14:36–39, 1993.

Ryden, E.B., N.S. Lipman, N.S. Taylor, *et al.* *Clostridium difficile* typhlitis associated with cecal mucosal hyperplasia in Syrian hamsters. *Lab Anim Sci* 41:553–558, 1991.

Tabaqchali, S. Epidemiologic markers of *Clostridium difficile*. *Rev Infect Dis* 12(Suppl 2):S192–S199, 1990.

Thilsted, J.P., W.M. Newton, R.A. Crandell, R.F. Bevill. Fatal diarrhea in rabbits resulting from the feeding of antibiotic-contaminated feed. *J Am Vet Med Assoc* 179:360–362, 1981.

Toma, S., G. Lesiak, M. Magus, *et al.* Serotyping of *Clostridium difficile*. *J Clin Microbiol* 26:426–428, 1988.

Traub-Dargatz, J.L., R.L. Jones. Clostridia-associated enterocolitis in adult horses and foals. *Vet Clin North Am Equine Pract* 9:411–421, 1993.

Weber, A., P. Kroth, G. Heil. Untersuchungen zum Vorkommen von *Clostridium difficile* in Kotproben von Hunden und Katzen. *Zentralbl Veterinarmed* 36:568–576, 1989.

FOOD POISONING CAUSED BY VIBRIO PARAHAEMOLYTICUS

ICD-10 A 05.3

ICD-10 A05.3 foodborne *Vibrio parahaemolyticus* intoxication

vibrionaceae

65 20

Wagatsuma

Kanagawa

hemolysin

(TDH)

(TRH)

112

%24.3 %52.3

[illegible] %11.2 [illegible] (12) [illegible] .(17) [illegible]

[illegible] (Fab [illegible] .(9) antihemolysin serum [illegible]

[illegible] .(1) [illegible] .(15) [illegible]

[illegible] .1953 [illegible] %50-70 [illegible] .(13)

[illegible] 1.700 [illegible] 1978 [illegible] Louisiana [illegible] Port Allen [illegible]

.(CDC 1978) [illegible] 600 [illegible] 6 [illegible] %86 [illegible] %24 [illegible] 1991 [illegible] .(13) [illegible] 1986 [illegible] 1983 [illegible] Bahamas [illegible] 348 [illegible] (*Strombus gigas*) [illegible]

[illegible] Kanagawa [illegible] 8 [illegible] 14 [illegible] 5 [illegible] 800 [illegible]

13 [illegible] %1.4 [illegible] %23 [illegible] 221 [illegible]

[illegible] %8 [illegible]

[illegible] Hemolysin [illegible] (5) [illegible] 8 [illegible] (%38) 21 [illegible] 14 [illegible] (8) [illegible] (%1.3) 1.100 [illegible] 7 [illegible] %7.1 [illegible] (8) K [illegible]

[illegible]

6 [illegible] 24 [illegible] 12 [illegible] 90 [illegible] (15) [illegible] (6) [illegible] isolates [illegible]

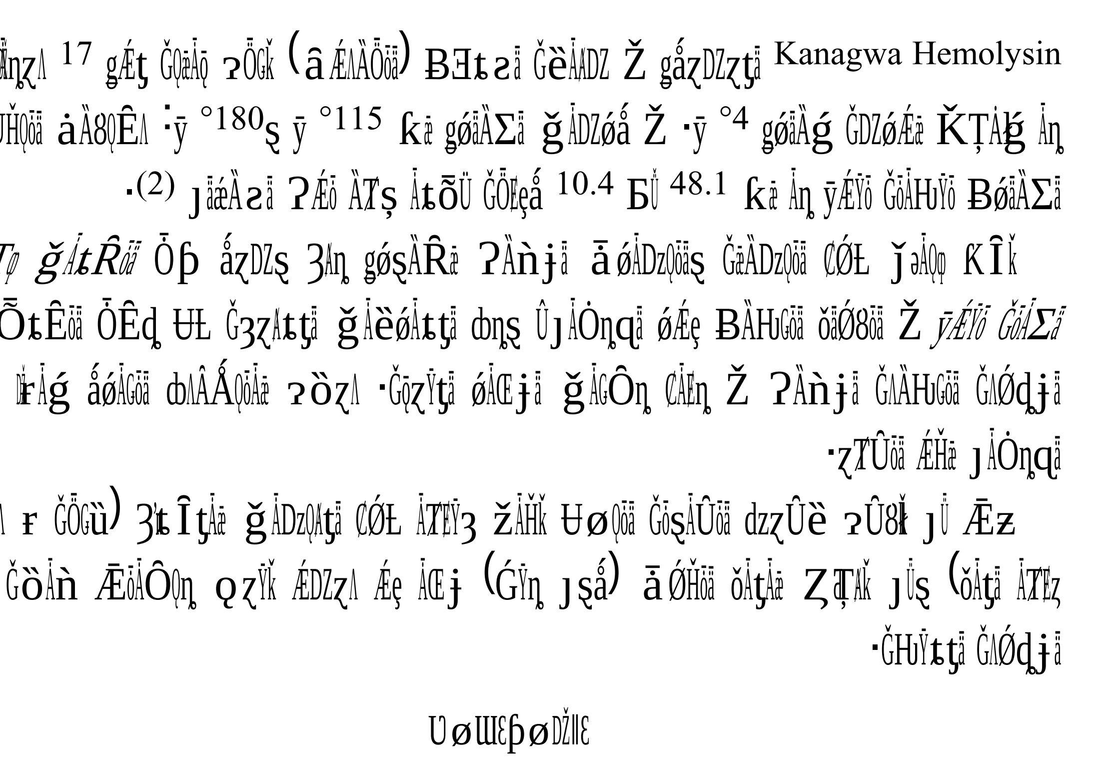
[illegible] Sautter *et al* 1988 [illegible] 18 [illegible]

[illegible]

[illegible] (TCBS) [illegible] Wagatsuma

[illegible] Hemolysin [illegible] Hemolysin [illegible]

[illegible] Hemolysin [illegible] PH [illegible]



Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bradshaw, J.G., D.B. Shah, A.J. Wehby, *et al.* Thermal inactivation of the Kanagawa hemolysin of *Vibrio parahaemolyticus* in buffer and shrimp. *J Food Sci* 49:183–187, 1984.

Chakrabarti, M.K., A.K. Sinha, T. Biswas. Adherence of *Vibrio parahaemolyticus* to rabbit intestinal epithelial cells *in vitro*. *FEMS Microbiol Lett* 68:113–117, 1991.

Doyle, M.P. Pathogenic *Escherichia coli*, *Yersinia enterocolitica*, and *Vibrio parahaemolyticus*. *Lancet* 336(8723):1111–1115, 1990.

Kelly, M.T., E.M. Stroh. Urease-positive, Kanagawa-negative *Vibrio parahaemolyticus* from patients and the environment in the Pacific Northwest. *J Clin Microbiol* 27:2820–2822, 1989.

Klontz, K.C. Fatalities associated with *Vibrio parahaemolyticus* and *Vibrio cholerae* non-O1 infections in Florida (1981 to 1988). *South Med J* 83:500–502, 1990.

Magalhães, V., R.A. Lima, S. Tateno, M. Malgahães. Gastroenterites humanas associadas a *Vibrio paraharmolyticus* no Recife, Brasil. *Rev Inst Med Trop Sao Paulo* 33:64–68, 1991a.

Magalhães, M., V. Malgahães, M.G. Antas, S. Tateno. Isolation of urease-positive *Vibrio parahaemolyticus* from diarrheal patients in northeast Brasil. *Rev Inst Med Trop Sao Paulo* 33:263–265, 1991b.

Nakasone, N., M. Iwanaga. Pili of a *Vibrio parahaemolyticus* strain as a possible colonization factor. *Infect Immun* 58:61–69, 1990.

Nakasone, N., M. Iwanaga. The role of pili in colonization of the rabbit intestine by *Vibrio parahaemolyticus* Na2. *Microbiol Immunol* 36:123–130, 1992.

Sautter, R.L., J.S. Taylor, J.D. Oliver, C. O'Donnell. *Vibrio parahaemolyticus* (Kanagawa-negative) wound infection in a hospital dietary employee. *Diagn Microbiol Infect Dis* 9:41–45, 1988.

Shirai, H., H. Ito, T. Hirayama, *et al.* Molecular epidemiologic evidence for association of thermostable direct hemolysin (TDH) and TDH-related hemolysin of *Vibrio parahaemolyticus* with gastroenteritis. *Infect Immun* 58:3568–3573, 1990.

Snydman, D.R., S.L. Gorbach. Bacterial food poisoning. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infections of Humans*. 2nd ed. New York: Plenum Medical Book Co.; 1991.

Spriggs, D.R., R.B. Sack. From the National Institute of Allergy and Infectious Diseases. Summary of the 25th United States-Japan Joint Conference on Cholera and Related Diarrheal Diseases. *J Infect Dis* 162:584–590, 1990.

Twedt, R.M. *Vibrio parahaemolyticus*. *In*: Doyle, M., ed. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). *Vibrio parahaemolyticus* foodborne outbreak—Louisiana. *MMWR Morb Mortal Wkly Rep* 27:345–346, 1978.

Yoh, M., T. Miwatani, T. Honda. Comparison of *Vibrio parahaemolyticus* hemolysin (Vp-TRH) produced by environmental and clinical isolates. *FEMS Microbiol Lett* 71:157–161, 1992.

GLANDERS

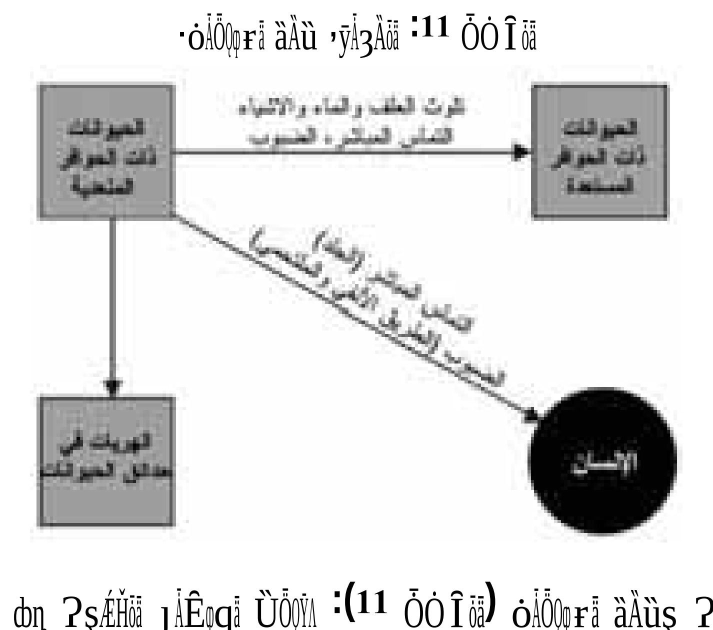
ICD-10 A 24.0

phthisis ... farcy ... .maliasmus

(*Actinobacillus* ... *Malleomyces* ...) ... ,*Pseudomonas mallei*

... 1965 ... .[4]

ȦƬşȦȀǩ ǦDzƗǬφ ȳȦȝȀöä ȏȀɳ ȴǵäȥŸöä ǨÛǬöä :Circuses ğȦõƘÊöäş ğȦφäȥƗΣä ȨəäǼǵ Ž
·ȀǹǕ ȏǿȦȝ ɃȥǬ ÆŸȮöä ·ǦȦÆȞȀţä ȀȥäȥΣä ğäæ ğȦφȥƗΣä ȳȥΣ
·ȯȦǬφɍä äȀü ،ȳȦȝȀöä :11 ŌȮÎöä



ȝɳ âȦȶǬöä ȯŸǹ ȸɳ ʔşǼȞöä ɉȦÊφɋä ȔǬŸȀ :(11 ŌȮÎöä) ȯȦǬφɍä äȀüş ʔşǼȞöä ǿǼÔɳ
ÛÌǦƨä ğŸǦÛòä Ōǯɳ ǦƥáȀɳ ȣşȀş Ž ǦȝȥȑȥţäȭŸǩ ǦòȀǹ ÛǦäȦÔţä ȀȥäȥΣä ğäæ ğȦφäȥƗΣä
ğääȀȥǕş ɄȦφɟä ɏƗDzȀöä ȸɳ Ōõ ŌȮÎȀ ·ǦƗÆȞöäş ǦƗȦφɟä ǦƗüȦǺţäş ÆŸƨä ɄȽ ȯȥǹÆöä āäȥæǕ
·ʔşǼȞŸö ǿǼÔɳ ǦǬȥŸǬţä ȳȦÊDzɟäş ǦȀÆŸƨä ğȦǵȀǬöä

Ȝȝ ÛȼÊȦφ ţȥȀöä ğäæ ʔȀǹɟä ğȦφäȥƗΣä ȸɳ ʔşǼȞöä ȀȥäȥΣä ğäæ ğȦφäȥƗΣä ÆÊǬȮǩ
·ȀȒȀǕ ǦȀÆȞȀţä ǳzşȀƨäş ȧȦÎȀǬèɍä ȨȀü ȸȝ ɉȥȮȀ Æęş ÛɄÊƗəǿ ŌȮÎæ ɄȶȒƬä ȨȀÛöä

·ǦƗɳȦȝȀöä ǦȀəäȀöä ţáȥǬÊɳ ɄȽ ȀȥäȥΣä ğäæ ğȦφäȥƗΣä · ȏȀţä ğȦƗəȦæş Ž ğȦφäȥƗΣä ǿşá
· āȀΣä ǒȀȀǬǕ ǦòȀǹş ǦȀȒΣä ğŸǦÛòɍä Ž ƘǦȮöä (ɄǿφäȥƗΣä ǒȀæȥöä) ȣäȥÊöä ϼǼǵ
şǕ ŽȦÎţä Ž ȏȀţä ɂŸȝ ȗȀȀΣä ȸȝ ǦöşǘÊɳ ǦȀɳȦȮöä şǕ ǦȀɳȀţä ʔşǼȞöȦæ ǦæȀÔţä ȯȥƗɿä ɈǬȞǩ
ɉȦÊφɋä ɈǬȞȀ · ȏȀţä ǿȦÎǬä Ž ȴȽȦÊȀ Ȁǹǿ ɉȦȮɳ ȸɳ ȦƬŸȮȀǩ ɉǕ ƂǕ ǦȥȦȑɋȦæ ÛȀɳ ǦŌÛȀɳ
·ƘȑǿȦȝ ǒȀȀȥǬǕ ȴǵäȥŸöäş

ţǿȦöä ȳäǼȦǬèȦæ :ǦƗDzȥǿȥȀǬõȦǦöä Îȥƕȥöä ·Ǖ :ʔŸȝ ȳȦȝȀöä ȰƗȦÎǩ ǼȶǬȞȀ :ȰƗȦÎǬöä
ȸɳ ɏƗÊφ şǕ ǦƗȦφɟä şǕ ǦȀÆŸƨä ğääȀȥɋȦæ (ȏǿäȥõöä ȸɳ ɉäȥǵ Humster) ǻȀÆõöä ǦƗŌŸǩ şǕ
(mullein ƘȦŸţä ȳäǼȦǬèȦæ :ǦDzǿǘţä ğäǿȦǬǹɍä · ā · ƘǬəȀöä ǦòȀǹş ǦƗŸǹäǼöä ȯȦȒȝɟä

Blood, D.C., J.A. Henderson. *Veterinary Medicine*. 4th ed. Baltimore: Williams & Wilkins; 1974.

Bruner, D.W., J.H. Gillespie. *Hagan's Infectious Diseases of Domestic Animals*. 6th ed. Ithaca: Comstock; 1973.

Cluff, L.E. Diseases caused by *Malleomyces*. *In*: Beeson, P., B.W. McDermott, J.B. Wyngaarden, eds. *Cecil Textbook of Medicine*. 15th ed. Philadelphia: Saunders; 1979.

Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO)/International Office of Epizootics (OIE). *Animal Health Yearbook, 1971*. Rome: FAO; 1972.

Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO)/International Office of Epizootics (OIE). *Animal Health Yearbook, 1984*. Rome: FAO; 1985.

Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO)/International Office of Epizootics (OIE). *Animal Health Yearbook, 1992*. Rome: FAO; 1993. (FAO Production and Animal Health Series 32).

Hagebock, J.M., L.K. Schlater, W.M. Frerichs, D.P. Olson. Serologic responses to the mallein test for glanders in solipeds. *J Vet Diagn Invest* 5:97–99, 1993.

Hipólito, O., M.L.G. Freitas, J.B. Figuereido. *Doenças Infeto-Contagiosas dos Animais Domésticos*. 4th ed. São Paulo: Melhoramentos; 1965.

International Office of Epizootics (OIE). *Report on the Disease Status Worldwide in 1984. 53rd General Session*. Paris: IOE; 1985. (Document 53SG/2).

International Office of Epizootics (OIE). *Enfermedades animales señaladas a la OIE, estadísticas 1982*. Paris: OIE; 1982.

Langeneger, J., J. Dobereiner, A.C. Lima. Foco de mormo (Malleus) na região de Campos, Estado do Rio de Janeiro. *Arq Inst Biol Anim* 3:91–108, 1960.

Oudar, J., L. Dhennu, L. Joubert, A. Richard, J.C. Coutard, J.C. Proy, *et al*. A propos d'un récent foyer de morve du cheval en France. *Bull Soc Sci Vet Med Comp* 67:309–317, 1965.

Van der Schaaf, A. Malleus. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Van Goidsenhoven, C., F. Schoenaers. *Maladies Infectieuses des Animaux Domestiques*. Liège: Desoer; 1960.

Cynodegmi *Canimorsus*

INFECTION CAUSED BY *CAPNOCYTOPHAGA CANIMORSUS AND C. CYNODEGMI*

ICD 10 A28.8

T 14.1

ICD-10 A28.8 other specified zoonotic bacterial diseases, not elsewhere classified; T14.1 open wound of unspecified body region

DF-2 DF-2

DF-2 (CDC) (dysgonic fermenter-2)

1961 DF-2 1976

Canimorsus

3-1 (3) *Cynodegmi*

%5 %10 %5

CDC DF-1

(*Sputigena, Ochracea* ,gingivalis

Canimorsus *Cynodegmi*

[illegible] [3] [illegible]
[illegible] CDC [illegible]
[illegible] *Canimorsus*
[illegible]

[illegible] 1993 [illegible] 1961 [illegible]
[illegible] *Canimorsas* [illegible] 200 CDC [illegible]
[illegible] *Canimorsus* [illegible] [13] [illegible]
[illegible] %77 [illegible] 50 [illegible]
[illegible] *Cynodegmi* [illegible]

[illegible] *cynodegmi* [illegible] *canimorsus* [illegible]
[illegible]

[illegible] *canimorsus*
[illegible] *canimorsus* [illegible]
[illegible] 66 [illegible]
[illegible] 48 [illegible]
[illegible]

16 ... (6)

47 ... 5 ... *canimorsus* ... (7) ... 27 ...

... (12)

... *cynodegmi canimorsus* ...

... *cynodegmi canimorsus* ...

%3 ... (8) ... %23 ... (9)

... *cynodegmi canimorsus* ...

50 ... 4 ... *canimorsus* ... (%8)

[illegible] %24 [illegible] 180 [illegible] .[11, 5, 4, 2]
[illegible] *cynodegmi* [illegible] %11 [illegible] *canimorsus* [illegible]
[illegible] %25 [illegible] %33) [illegible]
.[14] [illegible]
[illegible] *C. canimorsus* [illegible]
[illegible]
[illegible] IgG [illegible] IgM [illegible]
[illegible] Tuftsin [illegible]
.[1] [illegible] IgG
[illegible]
.[10] [illegible]

[illegible]
[illegible]

[illegible] *Canimorsus* [illegible]
[illegible]
[illegible] *cynodegmi* [illegible]
[illegible]

[illegible]

ÙøШƐϸøǱǁƐ

August, J.R. Dysgonic fermenter-2 infections. *J Am Vet Med Assoc* 193:1506–1508, 1988.

Bailie, W.E., E.C. Stowe, A.M. Schmitt. Aerobic bacterial flora of oral and nasal fluids of canines with reference to bacteria associated with bites. *J Clin Microbiol* 7:223–231, 1978. Cited in: August, J.R. Dysgonic fermenter-2 infections. *J Am Vet Med Assoc* 193:1506–1508, 1988.

Brenner, D.J., D.G. Hollis, G.R. Fanning, R.E. Weaver. *Capnocytophaga canimorsus* sp. nov. (formerly CDC group DF-2), a cause of septicemia following dog bite, and *C. cynodegmi* sp. nov., a cause of localized wound infection following dog bite. *J Clin Microbiol* 27:231–235, 1989.

Carpenter, P.D., B.T. Heppner, J.W. Gnann. DF-2 bacteremia following cat bites. Report of two cases. *Am J Med* 82:621–623, 1987.

Chan, P.C., K. Fonseca. Septicemia and meningitis caused by dysgonic fermenter-2 (DF-2). *J Clin Pathol* 39:1021–1024, 1986.

Clarke, K., D. Devonshire, A. Veitch, *et al.* Dog-bite induced *Capnocytophaga canimorsus* septicemia. *Aust New Zealand J Med* 22:86–87, 1992.

Hantson, P., P.E. Gautier, M.C. Vekemans, *et al.* Fatal *Capnocytophaga canimorsus* septicemia in a previously healthy woman. *Ann Emerg Med* 20:93–94, 1991.

Hicklin, H., A. Verghese, S. Alvarez. Dysgonic fermenter 2 septicemia. *Rev Infect Dis* 9:884–890, 1987.

Hsu, H-W., R.W. Finberg. Infections associated with animal exposure in two infants. *Rev Infect Dis* 11:108–115, 1989.

Kanagasundaram, N., C.M. Levy. Immunologic aspects of liver disease. *Med Clin North Am* 63:631–642, 1979. Cited in: Hicklin, H., A. Verghese, S. Alvarez. Dysgonic fermenter 2 septicemia. *Rev Infect Dis* 9:884–890, 1987.

Martone, W.J., R.W. Zuehl, G.E. Minson, W.M. Scheld. Postsplenectomy sepsis with DF-2: Report of a case with isolation of the organism from the patient's dog. *Ann Intern Med* 93:457–458, 1980. Cited in: August, J.R. Dysgonic fermenter-2 infections. *J Am Vet Med Assoc* 193:1506–1508, 1988.

Paton, B.G., L.D. Ormerod, J. Peppe, K.R. Kenyon. Evidence for a feline reservoir of dysgonic fermenter 2 keratitis. *J Clin Microbiol* 26:2439–2440, 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). *Capnocytophaga canimorsus* sepsis misdiagnosed as plague—New Mexico, 1992. *MMWR Morb Mortal Wkly Rep* 42:72–73, 1993.

Westwell, A.J., K. Kerr, M.B. Spencer, *et al.* DF-2 infection. *Br Med J* 298:116–117, 1989.

LEPROSY !ƐPШǁƐ

ICD-10 A30.9 leprosy, unspecified ĬYŇǰǁƐ ϸĭȜ !ƐPШǁƐ ICD-10 A 30.9

.Hanseniasis ȳäǾƨä ÛȸÊǵĿ ŏäá ˙ğ ĺźáäÀţä

(*Mycobacterium leprae*

(*Dasypus novemcinctus*)

[4,3]

(33)

%80 [93]

(42) [5]

%90 Papua New Guinea

(*Dasypus novemcinctus*)

[illegible]

[illegible] .(12) [illegible] 6 [illegible] .(23) [illegible]

[illegible] Cercocebus [illegible] (*Cercocebus torquatus atys* [illegible] .(31-29) 1975 [illegible] .(31) DNA homology

[illegible] (14-5) [illegible] .*Cercocebus* [illegible]

(30-28-39)

(36)

(Lepromas

[illegible] (41) [illegible]

[illegible] *Paucibacillary* [illegible] .1

[illegible] tuberculoid (T) [illegible] indeterminate (I) [illegible] Polar tabrculoid (TT) [illegible] indeterminate (I) [illegible] Ridley and [illegible] Borderline tuberculoid (BT)) [illegible] 2 > [illegible] Jopling [illegible] Ridley [illegible]

Lepromatous (L) [illegible] *Multibacillary* [illegible] .2

[illegible] borderline (B) [illegible] borderline lepromatous (BL) [illegible] Lepromatous [illegible] Ridley and Jpoling [illegible] Ridley [illegible] 2≤ [illegible]

[illegible]

[illegible] (*Dusypus novemcinctus*) [illegible]

Kupffer

(22)

°35-°30

(12)

12

(24)

Cercocebus

16

Ridley and Jopling

(30)

Ziehl-Neelsen

Fite-Furaco

[11]

Mitsuda

[28]

Mitsuda

[17]

PGL-1

ELISA

[illegible] (17) [illegible] epitope [illegible] (4) [illegible] (5) [illegible] PGL-1 [illegible]

[illegible] Dapson [illegible] Rifampicin [illegible] Clofazimine [illegible] 3.7 [illegible] 1986 [illegible] 5.4 [illegible] 1990 [illegible]

[illegible] 1992 [illegible] Rifampisin [illegible] Ofloxacin [illegible] Ofloxacin [illegible]

[illegible] (43) [illegible]

UøɯɛþøDžɛ

Amezcua, M.E., A. Escobar-Gutierrez, E.E. Storrs, *et al.* Wild Mexican armadillo with leprosy-like infection [letter]. *Int J Lepr Other Mycobact Dis* 52:254–255, 1984.

Bechelli, L.M., V. Martínez Domínguez. Further information on the leprosy problem in the world. *Bull World Health Organ* 46:523–536, 1972. Cited in: Bullock, W.E. *Mycobacterium leprae* (Leprosy). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Binford, C.H., W.M. Meyers, G.P. Walsh. Leprosy. *JAMA* 247:2283–2292, 1982.

Binford, C.H., W.M. Meyers, G.P. Walsh, E.E. Storrs, H.L. Brown. Naturally acquired leprosy-like disease in the nine-banded armadillo (*Dasypus novemcinctus*): Histopathologic and microbiologic studies of tissues. *J Reticuloendothel Soc* 22:377–388, 1977.

Brett, S.J., S.N. Payne, J. Gigg, *et al.* Use of synthetic glycoconjugates containing the *Mycobacterium leprae* specific and immunodominant epitope of phenolic glycolipid I in the serology of leprosy. *Clin Experim Immunol* 64:476–483, 1986.

Brubaker, M. Leprosy Control in the Americas. Part I: General Considerations. *In*: Bolivar's Bicentennial Seminar on Leprosy Control: Report: Caracas 12–14 September 1983. Pan American Health Organization, 1983. (PNSP/84–05).

Bullock, W.E. Leprosy (Hansen's disease). *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: W.B. Saunders; 1982.

Bullock, W.E. *Mycobacterium leprae* (Leprosy). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Burgess, P.J., P.E. Fine, J.M. Ponnighaus, C. Draper. Serological tests in leprosy. The sensitivity, specificity and predictive value of ELISA tests based on phenolic glycolipid antigens, and the implications for their use in epidemiological studies. *Epidemiol Infect* 101:159–171, 1988.

Clark, K.A., S.H. Kim, L.F. Boening, *et al.* Leprosy in armadillos (*Dasypus novemcinctus*) from Texas. *J Wildl Dis* 220–224, 1987.

Convit, J., M.E. Pinardi. A simple method for the differentiation of *Mycobacterium leprae* from other mycobacteria through routine staining technics. *Int J Lepr Other Mycobact Dis* 40:130–132, 1972.

Donham, K.J., J.R. Leininger. Spontaneous leprosy-like disease in a chimpanzee. *J Infect Dis* 136:132–136, 1977.

Filice, G.A., R.N. Greenberg, D.W. Fraser. Lack of observed association between armadillo contact and leprosy in humans. *Am J Trop Med Hyg* 26:137–139, 1977.

Fine, P.E. Leprosy: The epidemiology of a slow bacterium. *Epidemiol Rev* 4:161–188, 1982.

Freiberger, H.F., H.H. Fudenberg. An appetite for armadillo. *Hosp Practice* 16:137–144, 1981.

Howerth, E.W., D.E. Stallknecht, W.R. Davidson, E.J. Wentworth. Survey for leprosy in nine-banded armadillos (*Dasypus novemcinctus*) from the southeastern United States. *J Wildl Dis* 26:112–115, 1990.

Jacobson, R.R. Leprosy. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infections of Humans*. 2nd ed. New York: Plenum; 1991.

Job, C.K., E.B. Harris, J.L. Allen, R.C. Hastings. A random survey of leprosy in wild nine-banded armadillos in Louisiana. *Int J Lepr Other Mycobact Dis* 54:453–457, 1986a.

Job, C.K., E.B. Harris, J.L. Allen, R.C. Hastings. Thorns in armadillo ears and noses and their role in the transmission of leprosy. *Arch Pathol Lab Med* 110:1025–1028, 1986b.

Job, C.K., R.M. Sánchez, R.C. Hastings. Manifestations of experimental leprosy in the armadillo. *Am J Trop Med Hyg* 34:151–161, 1985.

Kirchheimer, W.F. Leprosy (Hansen's Disease). *In*: Stoenner, H., W. Kaplan, M. Torten, eds. Vol I, Section A: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1979.

Kirchheimer, W.F., E.E. Storrs, C.H. Binford. Attempts to establish the armadillo (*Dasypus novemcinctus Linn*) as model for the study of leprosy. II. Histopathologic and bacteriologic post-mortem findings in lepromatoid leprosy in the armadillo. *Int J Lepr Other Mycobact Dis* 40:229–242, 1972.

Leininger, J.R., K.J. Donham, W.M. Meyers. Leprosy in a chimpanzee. Postmortem lesions. *Int J Lepr Other Mycobact Dis* 48:414–421, 1980.

Leininger, J.R., K.J. Donham, M.J. Rubino. Leprosy in a chimpanzee. Morphology of the skin lesions and characterization of the organism. *Vet Pathol* 15:339–346, 1978.

Lumpkin III, L.R., G.F. Cox, J.E. Wolf, Jr. Leprosy in five armadillo handlers. *J Am Acad Dermatol* 9:899–903, 1983.

Martin, L.N., B.J. Gormus, R.H. Wolf, G.P. Walsh, W.M. Meyers, C.H. Binford, *et al.* Experimental leprosy in nonhuman primates. *Adv Vet Sci Comp Med* 28:201–236, 1984.

Meyers, W.M., G.P. Walsh, C.H. Binford, H.L. Brown, R.H. Wolf, B.J. Gormus, *et al.* Multibacillar leprosy in unaltered hosts, with emphasis on armadillos and monkeys [abstract]. *Int J Lepr Other Mycobact Dis* 50:584–585, 1982.

Meyers, W.M., G.P. Walsh, C.H. Binford, R.H. Wolf, B.J. Gormus, L.N. Martin, *et al.* Models of multibacillary leprosy in unaltered hosts: Current Status. *In*: Bolivar's Bicentennial Seminar on Leprosy Control: Report: Caracas 12–14 September 1983. Pan American Health Organization, 1983. (PNSP/84–05).

Meyers, W.M., G.P. Walsh, H.L. Brown, C.H. Binford, P.J. Gerone, R.H. Wolf, *et al.* Leprosy in a mangabey monkey (*Cercocebus torquatus atys* "sooty" mangabey) [abstract]. *Int J Lepr Other Mycobact Dis* 49:500–502, 1981.

Meyers, W.M., G.P. Walsh, H.L. Brown, C.H. Binford, G.D. Imes, Jr., T.L. Hadfield, *et al.* Leprosy in a mangabey monkey—naturally acquired infection. *Int J Lepr Other Mycobct Dis* 53:1–14, 1985.

Meyers, W.M., G.P. Walsh, H.L. Brown, Y. Fukunishi, C.H. Binford, P.J. Gerone, *et al.* Naturally-acquired leprosy in a mangabey monkey (*Cercocebus* spp.) [summary]. *Int J Lepr Other Mycobact Dis* 48:495–496, 1980.

Noorden, S.K. Multidrug therapy (MDT) and leprosy control. *Indian J Lepr* 62:448–458, 1990.

Rastogi, N., C. Frehel, A. Ryter, H.L. David. Comparative ultrastructure of *Mycobacterium leprae* and *M. avium* grown in experimental hosts. *Ann Microbiol* 133:109–128, 1982.

Smith, J.H., D.S. Folse, E.G. Long, J.D. Christie, D.T. Crouse, M.E. Tewes, *et al.* Leprosy in wild armadillos (*Dasypus novemcinctus*) of the Texas Gulf Coast: Epidemiology and mycobacteriology. *J Reticuloendothel Soc* 34:75–88, 1983.

Stallknecht, D.E., R.W. Truman, M.E. Hugh-Jones, C.K. Job. Surveillance for naturally acquired leprosy in a nine-banded armadillo population. *J Wildl Dis* 23:308–310, 1987.

Toro-González, G., G. Román-Campos, L. Navarro de Román. *Leprosy: neurología tropical*. Bogotá: Printer Colombiana; 1983.

Truman, R.W., E.J. Shannon, H.V. Hagstad, *et al.* Evaluation of the origin of *Mycobacterium leprae* infections in the wild armadillo, *Dasypus novemcinctus*. *Am J Trop Med Hyg* 35:588–593, 1986.

Walsh, G.P., W.M. Meyers, C.H. Binford. Naturally acquired leprosy in the nine-banded armadillo: A decade of experience 1975–1985. *J Leukoc Biol* 40:645–656, 1986. Cited in: Howerth, E.W., D.E. Stallknecht, W.R. Davidson, E.J. Wentworth. Survey for leprosy in nine-banded armadillos (*Dasypus novemcinctus*) from the southeastern United States. *J Wildl Dis* 26:112–115, 1990.

Walsh, G.P., W.M. Meyers, C.H. Binford, P.J. Gerone, R.H. Wolf, J.R. Leininger. Leprosy—a zoonosis. *Lepr Rev* 52(Suppl.1):77–83, 1981.

Walsh, G.P., E.E. Storrs, W.M. Meyers, C.H. Binford. Naturally acquired leprosy-like disease in the nine-banded armadillo (*Dasypus novemcinctus*): Recent epizootiologic findings. *J Reticuloendothel Soc* 22:363–367, 1977.

World Health Organization (WHO). *Epidemiology of leprosy in relation to control. Report of a WHO Study Group*. Geneva: WHO, 1985. (Technical Report Series 716).

World Health Organization (WHO). *WHO Expert Committee on Leprosy, Sixth Report*. Geneva: WHO; 1988. (Technical Report Series 768).

World Health Organization (WHO). Trials begin of new treatment for leprosy—disease could be conquered [press release]. Geneva: WHO; 3 February 1992. (Press Release WHO 5).

World Health Organization (WHO). Progress towards the elimination of leprosy as a public health problem. *Wkly Epidemiol Rec* 68(25):181–186, 1993.

Young, D.B., T.M. Buchanan. A serological test for leprosy with a glycolipid specific for *Mycobacterium leprae*. *Science* 221:1057–1059, 1983.

LEPTOSPIROSIS ǀƑĪDŽĭƥǦǁɛ ƀƐɋ

DžDŽ ǌƥɊǛɛ üƑǀ ƪǛɛ **A27.8** ÜĬ øǳƑƽƥĭǁɛ Ĭʓʀǁɛ ǀƑĪDŽĭƥǦǁɛ ƀƐɋ **ICD-10 A27.0**

ǀƑĪDŽĭƥǦǁɛ ƀƐɋ

ICD-10 A27.0 leptospirosis icterohaemorrhagica
A27.8 other forms of leptospirosis

ÆÔŐǟ ȝüÀę ʔƥ ʾǟÀǟ ȯʐŐǵ ʔƥ ʾÀÂøÀƪǟ ȝÆÛę ȏÀŋ Û"Weil ŐÀʐ ǒǟǻ ˸ǧÀʐǻǟÀţǟ ÛStuttgart ǧøÀ8ǩʐǪǐ ǒǟǻ ˸ŎǯŋʔÀǹÜ ǦÆŸȚ ǒÀƨÜş "ƙÛǟ ʔƥ ʾǧÀŎÀǪÊţǟ ʔƥ cane ˑ(ǡ¥ȮŸ) Canicola ʔÀĤÎǟ ʔƥ

ÀT ǦǵʐǪÀŋ ǧÀÀŒş ɄøɊşÀŸǵ ŌȮǐ ǧǟǽ ȴŒǫǟÀDZ Leptospires ǧÀÆʃƎǟ ˸ǧÀÆǦǦÊǟ 20-6 ÀTʐü ʣʂǟÀǪÀ ˑţøÂŸ ǦŸǟÀęş (ƙDzÊõǂÀǽ ǦǐÀǪĤŋ) ǦÆəǟʐŀǵ ǦõÀĦǪŋ Û(8ÀÛǹ) ǥøÀÀǒ

[illegible] 0.1 [illegible] *L. biflexa* [illegible] *L.interrogans* [illegible]

[illegible] serovars [illegible] 200 [illegible] 23 [illegible] (1) (16) [illegible] (29) [illegible]

[illegible] *icterohaemorrhagiae* [illegible] *canicola* [illegible]

[illegible]

[illegible]

[illegible] (1) [illegible] 160 [illegible]

Pomona

Canicola

63

10-7

Severity

(Weil's disease)

%10

Weil

.influenza

Amoxicilline Penicelline G

.(4)

13

grippotyphosa hardjo Pomona

Canicola

hardjo Pomona

Hebdomadis

(Bataviae) Paidjan

galtoni

(44) (42) (Canicola

5 4

[illegible] *hardjo* [illegible] (Sejroe [illegible]) *hardjo* [illegible] [2] [illegible]

[illegible] *hardjo* [illegible] (14) [illegible] (30) [illegible] .*hardjo hardjo-prajitno* [illegible] *hardjo hardjo-bovins* [illegible]

[illegible] %20 [illegible]

[illegible] morbidity [illegible]

Tetracycline [illegible] Penicilline G [illegible] 12.5) dihydrostreptomycin

[illegible] 20) [illegible] Sodium ampicilline [illegible] 25) dihydrostreptomycin [illegible] *hardjo* [illegible] (13) [illegible]

[illegible] *Cunicola* [illegible] *grippotyphosa* [illegible] *tarrassovi* [illegible] *Pomona* [illegible] *muenchen* [illegible] *bratislava* [illegible] *icterohemorrhagica* [illegible]

[illegible] *Tarrassov* [illegible] 30 [illegible] 15 [illegible] *canicola* [illegible] *muenchen* [illegible] *bratislava* [illegible] *hardjo* [illegible] 25) dihydrostreptomycin [illegible]

[illegible] *hardjo* [illegible] *canicola* [illegible] *sejroe* [illegible] [33] [illegible] [6] [illegible]

[illegible] [28] [illegible]

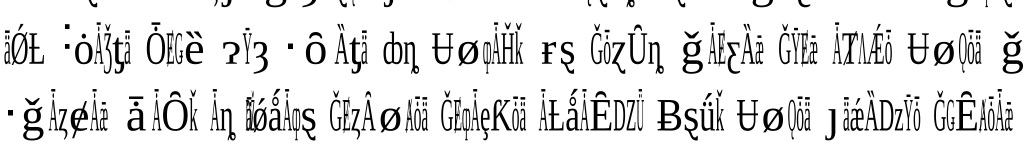
[illegible] Minnesota [illegible] 100 [illegible] *Pomona* [illegible] [33] [illegible]

[illegible]

[illegible] *pomona* [illegible] *hardjo* [illegible]
[illegible] *ballum* [illegible] *grippotyphosa* [illegible]
[illegible] *hardjo* [illegible]
[illegible] (11) [illegible]
[illegible]
hardjo [illegible]

[illegible]
[illegible]
[illegible]
[illegible]
tarrasovi [illegible] *paidjan* [illegible] *Pyrogenes* [illegible] *Canocola*
[illegible] *grippotyphosa* [illegible] *ballum* [illegible]
[illegible] (27) [illegible] *bratislava Pomona*
[illegible]
[illegible] 4-3 [illegible]
[illegible]
[illegible]
[illegible] *Canicola* [illegible]
[illegible]
%10.

[illegible]
[illegible]
[illegible]
[illegible] (12 [illegible]) [illegible]





[illegible] *Canicola* [illegible] 181 [illegible] 102 [illegible] 1970 [illegible] 1966 [illegible] 21 [illegible] (39) [illegible] *Australis* [illegible] *Pomona* [illegible]

[illegible] ranches [illegible]

[illegible] 7-6 [illegible]

[illegible]

[illegible] (MAT) Microscopic Agglutinatiom Test [illegible] 3-2 [illegible]

[illegible] (The macroscopic plate test) [illegible]

genus specific test

Patoc (24) (16)

(IgG IgM) (ElISA)

IgG IgM

IgG

hardjo

10

25

%90

(5) %1

subserovar hardjo

DNA hardjo genotype prajinto Hardjo genotype hardjo bovis

1987 LeFebrreb

Hardjo genotype hardjo bovis 3

75 60 DNA 1

3 24 2

13

(8) hardjo-bovis

PCR (25) .10

.1 .3 .2 .5 .4 .7 .6 .8

(32)

doxycycline (43)

Panama

doxycycline double – blind field

940

3 doxycycline 200

20 3 placebo

(%4.2 attack rate

(%0.2 doxycycline

(43) %95

(31)

%5

hardjo Pomona

Pomona grippotyphosa

Canicola

4-3

revaccination

6

(45)

hardjo- hardjo

(7) (9) bovis

IgM

IgG

IgG IgM

Alexander, A.D. Leptospira. *In:* Balows, A., W.J. Hausler, K.L. Hermann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology.* 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Alexander, A.D., W.E. Gochenour, Jr., K.R. Reinhard, M.K. Ward, R.H. Yagen. Leptospirosis. *In:* Bodily, H.L., ed. *Diagnostic Procedures for Bacterial, Mycotic and Parasitic Infections.* 5th ed. New York: American Public Health Association, 1970.

Alston, J.M., J.C. Broom. *Leptospirosis in Man and Animals.* Edinburgh, London: Livingstone; 1958.

Benenson, A.S., ed. *Control of Communicable Diseases in Man.* 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bercovich, Z., R. Taaijke, B.A. Bokhout. Evaluation of an ELISA for the diagnosis of experimentally induced and naturally occurring *Leptospira hardjo* infections in cattle. *Vet Microbiol* 21:255–262, 1990.

Bernard, W.V., C. Bolin, T. Riddle, *et al.* Leptospiral abortion and leptospiruria in horses from the same farm. *J Am Vet Med Assoc* 202:1285–1286, 1993.

Bolin, C.A., J.A. Cassells, R.L. Zuerner, G. Trueba. Effect of vaccination with a monovalent *Leptospira interrogans serovar hardjo* type hardjo-bovis vaccine on type hardjo-bovis infection of cattle. *Am J Vet Res* 52:1639–1643, 1991.

Bolin, C.A., R.L. Zuerner, G. Trueba. Comparison of three techniques to detect *Leptospira interrogans* serovar *hardjo* type hardjo-bovis in bovine urine. *Am J Vet Res* 50:1001–1003, 1989a.

Bolin, C.A., R.L. Zuerner, G. Trueba. Effect of vaccination with a pentavalent leptospiral vaccine containing *Leptospira interrogans* serovar *hardjo* type hardjo-bovis on type hardjo-bovis infection in cattle. *Am J Vet Res* 50:2004–2008, 1989b.

Cacchione, R.A. Enfoques de los estudios de la leptospirosis humana y animal en América Latina. *Rev Asoc Argent Microbiol* 5:36–53, 100–111, 143–154, 1973.

Cousins, D.V., T.M. Ellis, J. Parkinson, C.H. McGlashan. Evidence for sheep as a maintenance host for *Leptospira interrogans* serovar *hardjo*. *Vet Rec* 124:123–124, 1989.

Diesch, S.L., H.C. Ellinghausen. Leptospiroses. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Ellis, W.A., J. Montgomery, J.A. Cassells. Dihydrostreptomycin treatment of bovine carriers of *Leptospira interrogans* serovar *hardjo*. *Res Vet Sci* 39:292–295, 1985.

Ellis, W.A., A.B. Thiermann. Isolation of leptospires from the genital tracts of Iowa cows. *Am J Vet Res* 47:1694–1696, 1986.

Everard, C.O., A.E. Green, J.W. Glosser. Leptospirosis in Trinidad and Grenada, with special reference to the mongoose. *Trans Roy Soc Trop Med Hyg* 70:57–61, 1976.

Faine, S., ed. Guidelines for the control of leptospirosis. Geneva: World Health Organization; 1982. (Offset Publication 67).

Faine, S. Leptospirosis. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infections of Humans*. 2nd ed. New York: Plenum Medical Book Co.; 1991.

Hanson, L.E., D.N. Tripathy, A.H. Killinger. Current status of leptospirosis immunization in swine and cattle. *J Am Vet Med Assoc* 161:1235–1243, 1972.

Hart, R.J., J. Gallagher, S. Waitkins. An outbreak of leptospirosis in cattle and man. *Brit Med J (Clin Res Ed)* 288(6435):1983–1984, 1984.

LeFebvre, R.B. DNA probe for detection of the *Leptospira interrogans* serovar *hardjo* genotype hardjo-bovis. *J Clin Microbiol* 25:2236–2238, 1987.

Leptospirosis in man, British Isles, 1983. *Br Med J (Clin Res Ed)* 288(6435):1984–1985, 1984.

Luzzi, G.A., L.M. Milne, S.A. Waitkins. Rat-bite acquired leptospirosis. *J Infect* 15:57–60, 1987.

Mazzonelli, J. Advances in bovine leptospirosis. *Bull Off Int Epizoot* 3:775–808, 1984.

Mazzonelli, J., G.T. Dorta de Mazzonelli, M. Mailloux. Possibilité de diagnostique sérologique des leptospires à l'aide d'un antigène unique. *Med Mal Infect* 4:253, 1974.

Mérien, F., P. Amouriaux, P. Perolat, *et al*. Polymerase chain reaction for detection of *Leptospira* spp. in clinical samples. *J Clin Microbiol* 30:2219–2224, 1992.

Myers, D.M. Serological studies and isolations of serotype *hardjo* and *Leptospira biflexa* strains from horses of Argentina. *J Clin Microbiol* 3:548–555, 1976.

Nielsen, J.N., G.K. Cochran, J.A. Cassells, L.E. Hanson. *Leptospira interrogans* serovar *bratislava* infection in two dogs. *J Am Vet Med Assoc* 199:351–352, 1991.

Parma, A.E., C.G. Santisteban, A.S. Fernández, *et al*. Relación antigénica entre *Leptospira interrogans*, cristalino y córnea equina, probada por enzimoinmunoensayo. *Rev Med Vet* 67:72–76, 1986.

Perolat, P., F. Grimont, F. Regnault, *et al*. rRNA gene restriction patterns of *Leptospira*: A molecular typing system. *Res Microbiol* 141:159–171, 1990.

Prescott, J. Treatment of leptospirosis [editorial]. *Cornell Vet* 81:7–12, 1991.

Sanford, J.P. Leptospirosis—time for a booster. *N Engl J Med* 310:524–525, 1984.

Shenberg, E., M. Torten. A new leptospiral vaccine for use in man. I. Development of a vaccine from *Leptospira* grown on a chemically defined medium. *J Infect Dis* 128:642–646, 1973.

Sillerud, C.L., R.F. Bey, M. Ball, S.I. Bistner. Serologic correlation of suspected *Leptospira interrogans* serovar *pomona*-induced uveitis in a group of horses. *J Am Vet Med Assoc* 191:1576–1578, 1987.

Songer, J.G., A.B. Thiermann. Leptospirosis. *J Am Vet Med Assoc* 193:1250–1254, 1988.

Spinu, I., V. Topcin, Trinh Thi Hang Quy, Vo Van Hung, Mguyen Sy Quoe, Chu Xnan Long, *et al.* L'homme comme réservoir de virus dans une épidémie de leptospirose survenue dans la jungle. *Arch Roum Path Exp* 22:1081–1100, 1963.

Stalheim, O.H. Vaccination against leptospirosis: Protection of hamsters and swine against renal leptospirosis by killed but intact gamma-irradiated or dihydrostreptomycin-exposed *Leptospira pomona*. *Am J Vet Res* 28:1671–1676, 1967.

Stalheim, O.H. Chemotherapy of renal leptospirosis in cattle. *Am J Vet Res* 30:1317–1323, 1969.

Stalheim, O.H. Duration of immunity in cattle in response to a viable, avirulent *Leptospira pomona* vaccine. *Am J Vet Res* 32:851–854, 1971.

Suárez Hernández, M., J. Bustelo Aguila, V. Gorgoy González, *et al.* Estudio epidemiológico de un brote de leptospirosis en bañistas en el poblado de Jicotea de la provincia Ciego de Ávila. *Rev Cubana Hig Epidemiol* 27:272–284, 1989.

Sulzer, C.R., W.L. Jones. *Leptospirosis Methods in Laboratory Diagnosis*. Atlanta: U.S. Centers for Disease Control and Prevention; 1974.

Szyfres, B. La leptospirosis como problema de salud humana y animal en América Latina y el área del Caribe. *In: VIII Reunión Interamericana sobre el Control de la Fiebre Aftosa y Otras Zoonosis*. Washington, D.C.: Organización Panamericana de la Salud; 1976. (Publicación Científica 316).

Szyfres, B., C.R. Sulzer, M.M. Galton. A new leptospiral serotype in the Bataviae serogroup from Argentina. *Trop Geogr Med* 19:344–346, 1967.

Takafuji, E.T., J.W. Kirkpatrick, R.N. Miller, *et al.* An efficacy trial of doxycycline chemoprophylaxis against leptospirosis. *N Engl J Med* 310:497–500, 1984.

Tedesco, L.F., G. Manrique, C.R. Sulzer. A new leptospiral serotype in the Canicola serogroup from Argentina. *Trop Geogr Med* 21:203–206, 1969.

Thiermann, A.B. Leptospirosis: Current developments and trends. *J Am Vet Med Assoc* 184:722–725, 1984.

Tripathy, D.N., A.R. Smith, L.E. Hanson. Immunoglobulins in cattle vaccinated with leptospiral bacterins. *Am J Vet Res* 36:1735–1736, 1975.

Van der Hoeden, J. Leptospirosis. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Waitkins, S.A. From the PHLS. Update on leptospirosis. *Brit Med J (Clin Res Ed)* 290(6480):1502–1503, 1985.

World Health Organization. Research needs in leptospirosis [memorandum]. *Bull World Health Organ* 47:113–122, 1972.

LISTERIOSIS [illegible]

[illegible] **ICD10 A32.1** [illegible] **A32.8** ([illegible]) [illegible] **A32.7** [illegible] ([illegible]) [illegible] **P37.2** [illegible]

ICD-10 A32.1 listerial meningitis and meningoencephalitis;

A32.7 listerial septicaemia; A32.8 other forms of listeriosis;
P37.2 neonatal (disseminated) listeriosis

Listerellosis,) [illegible] circling [illegible] (Listeriasis

[illegible] *L.monocytogenes* [illegible] *L. bulgarica* [illegible]) *L. ivanovii* [illegible] 5 [illegible]

[illegible] 0.5 [illegible] 2-0.5 [illegible] °25-20 [illegible] 9-6 [illegible] °45-3 [illegible] (%92) [illegible] 11 [illegible] (4) 1/2a [illegible] 1/2b [illegible] 4b [illegible]

(14) ·ʔşÆȞöä øÆÔŋ

ā ÀȒöä Ƃǚ ȗŧǪÅǩ %33 ˙gÆHʊǪţä ğ ÅÂɍȥöä Ž ǨŸÔŋ ǦÛŧÅŋ gåÄÅǪÊŋ 161 ŌòǛ ȸŋ
Ƃǚ %4 ǚ1/2a ȗŸÔţä ā ÀȒöä Ƃǚ %30 ǚ1/2b ȗŸÔţä ā ÀȒöä Ƃǚ %31.5 ǚ4b ȗŸÔţä
·(15) 1/2c ȗŸÔţä ā ÀȒöä Ƃǚ %0.5ş 3a ȗŸÔţä ā ÀȒöä Ƃǚ %1 ǚ3b ȗŸÔţä ā ÀȒöä
%50 ǚǦęÀÅǪŋ ǦƐŸÔŋ ā şÀ ȑ 7 ÂƐƐǬ Ź ˙ŌÅäâƎöä Ž gåÄÅǪÊŋ 71 øö ȗŸÔţä ǙƐŧÅǪöä ŏÅÅǪǚ
(21) .1/2a ǨφÅõ %29.6ş 4b ǨφÅõ ÅȚÅŋ

ǦƐ8æ ʔÀnǚ ğ ÅÛÛƯ ğ ÂȚƉŽ ÆŌȥ ɃÆƐȚǬ ā ȥŸèüõ ǨÆƐÅŋ ȷÅõ ȗŸÔţä ǙƐŧÅǪöä ȷǚ ɭďø
·ʔşÆȞöä øÆÔŋ ƙƐȞǩ ȸŋ ȸÒŧǪöä

ǙƐŧÅǪöäş Phage typing ğ ÅƐǪÅȞöÅæ ǙƐŧÅǪöä ˙ƙǪŌÅÂÛæ Ƃşǚ ŌÒÎæ ǙƐŧÅǪöä ɃÀDZǨ
˙ʔŧȚȞöä ÅƐφÅÛÅÀæ Ž ·electrophoretic enzyme typing ȗəÅæÀȚÒöä ȷŸǵÀöÅæ ȗʕÂøφqä
ÿäÆÅǪèÅæ %78 ǙƐŧÅǩ ȸÒʕ ˙ÅÊφÀȥ Ž ǗǦƐǪÅʒ 28 ÿäÆÅǪèÅæ ɃøäøØöä ȸŋ %64 ǙƐŧÅǩ ȸÒʕ
·ÅȚÛƐŧÅǩ ȸÒʕ ɍ ȗøǪöä ɃøäøØöä ȸŋ gƘǦõ ǦÅȥÅŋ ǦǦÊφ ÆDZȥǩ ƙǪöÅΣä Ÿõ Žş ǗǦƐǪÅʒ 20
ÀəÅȚÅæ ȗʒÀÅöä ǙƐŧÅǪöä ǦŌÅÀü ÿäÆÅǪèÅæ gÆǵȥǪÊţä ǦÅÄǪÊƐŸöä ɃøäøæʒƐP ǙƐŧÅǩ ȸÒʕ
ǙƐŧÅǪöä) ȗèÅǦÅÀöä RNA ÅφÀöä ǦÛèäȥæ ǙƐŧÅǪöä ȡzÅDzÅæ ÿÆÅǪèä ǨǯÅÆǵş (48) ȻÂøφqä
·(ȗèÅǦÅÀöä

ǦǪæÅÅöä Ž ʒèäş ŌÒÎæ gÆǵȥǪÊţä ǦÅÄǪÊƐŸöä ţàȥǪǩ ·øÅÎǪφɍä ȗţÅʒ ˙ŽäÀ8ƨä ţàȥǪöä
·ğ ÅφäȥƐΣäş ȷÅÊφqä ŏÅȞŋǚş ǦæÀǪöäş

·ʒÅǩÀţä ğ ÅƐȥȥöä ȯÆȞŋ ÆǦÊæ ÿÅŁ ôÀŋ ȼÅÒö ǗȐÀÅÅŋ ţȥęȥöä ˙ȷÅÊφqä Ž ǫşÆΣä
ȷäÆŸǦöä Ž ğ ɍÅHʊŸö ȹÅʒ ÂƐõÀǩ õÅÅŁ ·ǦƐŋÅÅöä ȷäÆŸǦöä ȸŋ ÆÅÆȞöä Ž øåÅφ ğ ÅÂÄǪÊƐŸöä ŏäå
ÀǯõǙ ɭŁ ȷäÆŸǦöä ȻØŁ Ž ȗøǦÛöä ȯÅŎä Ž ƙŸŋÅȞöä ȷɉ Åŋø gÆHʊǪţä ğ ÅÂɍȥöäş ǦƐæøşøşɉä
ǦÅåÅƠɍä ÅƐφÅţǚ ǦÅøȥȚƤ Ž ·ŌȒȥɉä ɃƎǪÅţä ɭʒÆöä ǦƐφÅÒŋǚ ÆǦÊæş ǚ ôÀŧŸö lookout ǨȞǦǪǩ
ǚ1985-9169 ȗŋÅʒ ƙæ ğ ÅÂÄǪÊƐŸöä ŏäå ȸŋ ǦöÅǵ 296 õÅÅŁ ȷÅõ ˙(ǦƐæÀ8öä ÅƐφÅţǚ) ǦŌæÅÊöä
ȸŋ ǨφÅõ ǦöşÅȞţä ɃøäøØöä ȸŋ %50 ·ǦÅÀȒΣä ȨüÅÅţä Ž ǨφÅõ ğ ɍÅΣä ȻØŁ ȸŋ %60
öȥÔΣä Ź ˙ʔŧȚȞöä ÅƐφÅÛÅÀæ Ž ·(43) 4b ȥŁ ǨʒȥƐì ÀǯõɉäȗŸÔţä ā ÀȒöä ȷÅõş ȷäÆöȥöä

[illegible]

31 ... 70-11 ... 4b ... (45)

... 58 ... 64 ... 1987 ... %28 ... 1992 ... (14) 1985 ... 4b ... %40 ... 691 ... %61 ... 91 ... (1987-1985) ... (1987-1983) ... (1985) ... 12 ... 35 ... 163 ... 1992 ... 23 ... 18 ... (55) ... 22 ... 63 ... 1993 ... 25 ... 4 ... 1992 ... lysotype

... 4 ... 25 ... 21 ... still births at term ... (rillettes) ... (*Bol Epidemiol Hebdom* No34, 1993) ...

... AIDS ...

[illegible] (45) [illegible] 300 [illegible] HIV

[illegible] poikilotherms [illegible] (alpacas [illegible])

[illegible] 1924 [illegible] 5 [illegible]

%39 [illegible] %50) [illegible] 50 [illegible] 18 [illegible] %2 [illegible] %0.15 [illegible]

ill-full-term baby

50

%70

ampicillin

8

(2)

Chloramphenicol

[illegible]

42

5 PH

(53)

(44)

(93)

(46)

(14)

(Franks)

(CDC, 1989)

(CDC, 1992) 1992

1990 1988

7.4 301 18

(%23) 67

2.6

Ampicillin

acriflavin Nalidixic acid

°30 24 °30 24

Lithium chloride

.(31) moxalactam

Rhodococcus equi

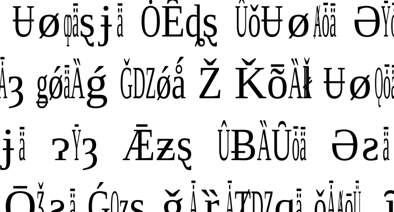
.(49)

enterococci

staphylococcus aureus

.(8) DNA

(CDC, 1992)



Alexander, A.V., R.L. Walker, B.J. Johnson, *et al.* Bovine abortions attributable to *Listeria ivanovii*: Four cases (1988–1990). *J Am Vet Med Assoc* 200:711–714, 1992.

Benenson, A.S., ed. *Control of Communicable Diseases in Man.* 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bojsen-Moller, J. Human listeriosis: Diagnostic, epidemiological and clinical studies. *Acta Pathol Microbiol Scand* (Suppl 229):1–157, 1972.

Bortolussi, R., W.F. Schlech III, W.L. Albritton. Listeria. *In:* Lennette, E.H., A. Balows, W.J. Hausler, Jr., H.J. Shadomy. *Manual of Clinical Microbiology.* 4th ed. Washington, D.C.: American Society for Microbiology; 1985.

Broadbent, D.W. Infections associated with ovine perinatal mortality in Victoria. *Aust Vet J* 51:71–74, 1975.

Cain, D.B., V.L. McCann. An unusual case of cutaneous listeriosis. *J Clin Microbiol* 23:976–977, 1986.

Charlton, B.R., H. Kinde, L.H. Jensen. Environmental survey for *Listeria* species in California milk processing plants. *J Food Protect* 53:198–201, 1990.

Datta, A.R., B.A. Wentz, D. Shook, M.W. Trucksess. Synthetic oligodeoxyribonucleotide probes for detection of *Listeria monocytogenes*. *Appl Environ Microbiol* 54:2933–2937, 1988.

Dehaumont, P. *Listeria monocytogenes* et produits alimentaires: "zérotolérance au moins." *Bull Epidemiol Hebdom* 24:109, 1992.

Dennis, S.M. Perinatal lamb mortality in Western Australia. 6. Listeric infection. *Aust Vet J* 51:75–79, 1975.

Fleming, D.W., S.L. Cochi, K.L. MacDonald, J. Brondum, P.S. Hayes, B.D. Plikaytis, *et al.* Pasteurized milk as a vehicle of infection in an outbreak of listeriosis. *N Engl J Med* 312(7):404-407, 1985.

Franck, M. Contribution a l'Étude de l'Épidémiologie des Listerioses Humaines et Animales [thesis]. École Nationale Vétérinaire de Lyon, France, 1974.

García, H., M.E. Pinto, L. Ross, G. Saavedra. Brote epidémico de listeriosis neonatal. *Rev Chil Pediatr* 54:330–335, 1983.

Gellin, B.G., C.V. Broome. Listeriosis. *JAMA* 261:1313–1320, 1989.

Gellin, B.G., C.V. Broome, A.W. Hightower. Geographic differences in listeriosis in the United States [abstract]. 27th Interscience Conference of Antimicrobial Agents and Chemotherapy. New York, Oct 5, 1987. Cited in: Gellin, B.G., C.V. Broome. Listeriosis. *JAMA* 261:1313–1320, 1989.

Gitter, M., R. Bradley, P.H. Blampied. *Listeria monocytogenes* infection in bovine mastitis. *Vet Rec* 107:390–393, 1980.

Gray, M.L., A.H. Killinger. *Listeria monocytogenes* and listeric infections. *Bact Rev* 30:309–382, 1966.

Green, H.T., M.B. Macaulay. Hospital outbreak of *Listeria monocytogenes* septicaemia: A problem of cross infection? *Lancet* 2:1039–1040, 1978.

Guevara, J.M., J. Pereda, S. Roel. Human listeriosis in Peru. *Tropenmed Parasitol* 30:59–61, 1979.

Hird, D.W. Review of evidence for zoonotic listeriosis. *J Food Protect* 50:429–433, 1987.

Hofer, E., G.V.A. Pessoa, C.E.A. Melles. Listeriose humana. Prevalência dos sorotipos de *Listeria monocytogenes* isolados no Brasil. *Rev Inst Adolfo Lutz* 44:125–131, 1984.

Johnson, J.L., M.P. Doyle, R.G. Cassens. *Listeria monocytogenes* and other *Listeria* spp. in meat and meat products. A review. *J Food Protect* 53:81–91, 1990.

Kampelmacher, E.H., L.M. van Noorle Jansen. Listeriosis in humans and animals in the Netherlands (1958–1977). *Zbl Bakt Hyg Orig A* 246:211–227, 1980.

Killinger, A.H. Listeriosis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Killinger, A.H., M.E. Mansfield. Epizootiology of listeric infection in sheep. *J Am Vet Med Assoc* 157:1318–1324, 1970.

Larsen, H.E. Epidemiology of listeriosis. The ubiquitous occurrence of *Listeria monocytogenes*. *In*: Proceedings, Third International Symposium on Listeriosis, Bilthoven, The Netherlands, 1966.

Linnan, M.J., L. Mascola, X.D. Lou, *et al.* Epidemic listeriosis associated with Mexican-style cheese. *N Engl J Med* 319:823–828, 1988.

Mair, N.S. Human listeriosis. *In*: Graham-Jones, O., ed. *Some Diseases of Animals Communicable to Man in Britain*. Oxford: Pergamon; 1968.

Manzullo, A. Epidemiología y epizootiología de la listeriosis. *Acta Bioq Clin Latinoam* 14:539–546, 1981.

Manzullo, A.C. Listeriosis [letter]. *An Acad Nacl Agr Vet* 44 (4):5–13, 1990.

McClain, D., W.H. Lee. Development of USDA-FSIS method for isolation of *Listeria monocytogenes* from raw meat and poultry. *J Assoc Off Anal Chem* 71:660–664, 1988.

McLauchlin, J. Human listeriosis in Britain, 1967–85, a summary of 722 cases. 1. Listeriosis during pregnancy and in the newborn. *Epidemiol Infect* 104:181–190, 1990a.

McLauchlin, J. Human listeriosis in Britain, 1967–85, a summary of 722 cases. 2. Listeriosis in non-pregnant individuals, a changing pattern of infection and seasonal incidence. *Epidemiol Infect* 104:191–201, 1990b.

Moro, M. Enfermedades infecciosas de las alpacas. 2. Listeriosis. *Rev Fac Med Vet* 16/17:154–159, 1961–1962.

Nieman, R.E., B. Lorber. Listeriosis in adults: A changing pattern. Report of eight cases and review of the literature, 1968–1978. *Rev Infect Dis* 2:207–227, 1980.

Owen, C.R., A. Neis, J.W. Jackson, H.G. Stoenner. A case of primary cutaneous listeriosis. *N Engl J Med* 362:1026–1028, 1960.

Paolasso, M.R. *Listeria* en Córdoba. *Acta Bioq Clin Latinoam* 14:581–584, 1981.

Pérez-Miravete, A., S. Giono. La infección perinatal listérica en México. II. Aislamiento de *Listeria monocytogenes* en septicemia del recién nacido. *Rev Inst Salubr Enferm Trop* 23:103–113, 1963.

Pinner, R.W., A. Schuchat, B. Swaminathan, *et al.* Role of foods in sporadic listeriosis. II. Microbiologic and epidemiologic investigation. The Listeria Study Group. *JAMA* 267:2046–2050, 1992.

Rocourt, J., J.M. Alonso, H.P. Seeliger. Virulence comparée des cinq groupes génomiques de *Listeria monocytogenes* (*sensu lato*). *Ann Microbiol* 134A:359–364, 1983.

Roncoroni, A.J., M. Michans, H.M. Bianchini, *et al.* Infecciones por *Listeria monocytogenes*. Experiencia de 15 años. *Medicina* 47:239–242, 1987.

Schlech, W.F., P.M. Lavigne, R.A. Bortolussi, *et al.* Epidemic listeriosis—evidence for transmission by food. *N Engl J Med* 308: 203–206, 1983.

Schmidt-Wolf, G., H.P.R. Seeliger, A. Schretten-Brunner. Menschliche Listeriose-Erkrankungen in der Bundesrepublik Deutschland, 1969–1985. *Zbl Bakt Hyg A* 265:472–486, 1987.

Schuchat, A., K.A. Deaver, J.D. Wenger, *et al.* Role of foods in sporadic listeriosis. I. Case-control study of dietary risk factors. *JAMA* 267:2041–2045, 1992.

Schuchat, A., B. Swaminathan, C.V. Broome. Epidemiology of human listeriosis. *Clin Microbiol Rev* 4:169–183, 1991.

Schwartz, B., C.A. Ciesielski, C.V. Broome, *et al.* Association of sporadic listeriosis with consumption of uncooked hot dogs and undercooked chicken. *Lancet* 2:779–782, 1988.

Seeliger, H.P.R. *Listeriosis*. New York: Hafner Publishing Co.; 1961.

Selander, R.K., D.A. Caugant, H. Ochman, *et al.* Methods of multilocus enzyme electrophoresis for bacterial population genetics and systematics. *Appl Environ Microbiol* 51:873–884, 1986.

Skalka, B., J. Smola, K. Elischerova. Routine test for *in vitro* differentiation of pathogenic and apathogenic *Listeria monocytogenes* strains. *J Clin Microbiol* 15:503–507, 1982.

Stamm, A.M., W.E. Dismukes, B.P. Simmons, C.G. Cobbs, A. Elliott, P. Budrich, *et al.* Listeriosis in renal transplant recipients: Report of an outbreak and review of 102 cases. *Rev Infect Dis* 4:665–682, 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Listeriosis associated with consumption of turkey franks. *MMWR Morb Mort Wkly Rep* 38(15):267–268, 1989.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Update: Foodborne listeriosis—United States, 1988–1990. *MMWR Morb Mort Wkly Rep* 41:251, 257–258, 1992.

Vázquez-Boland, J.A., L. Domínguez, M. Blanco, *et al.* Epidemiologic investigation of a silage-associated epizootic of ovine listeric encephalitis, using a new *Listeria*-selective enumeration medium and phage typing. *Am J Vet Res* 53:368–371, 1992.

Weis, J., H.P.R. Seeliger. Incidence of *Listeria monocytogenes* in nature. *Appl Microbiol* 30:29–32, 1975.

World Health Organization (WHO). Outbreak of listeriosis in 1992. *Wkly Epidemiol Rec* 68(13):89–91, 1993.

Young, S. Listeriosis in cattle and sheep. *In*: Faulkner, L.C., ed. *Abortion Diseases of Livestock*. Springfield: Thomas; 1968.

LYME DISEASE [illegible]

ICD 10 A69.2

Lyme [illegible] Lyme borreliosis [illegible] orthritis [illegible] spirochete [illegible] *Borrelia burgdorferi* [illegible] *Ixides ricinus* [illegible] .(21-20-10) [illegible]

[illegible] *Spirochaetaceae* [illegible] *Borrelia* [illegible] 39-11 [illegible] 11 [illegible] Plasmid- [illegible] .(Steere 1990) dependent

[illegible] 46 [illegible] 8 [illegible] 4 [illegible] New York [illegible] 1989-1985 [illegible] 22 [illegible] 4 [illegible] *Ixodes dammini* [illegible] 1992-1982 [illegible] 40000 [illegible] [1](White *et al*1 991)

[illegible]) *I. Scapuluris* [illegible] *Ixodex dammini* [illegible] [1] [illegible] *I.Scapularis* [illegible]

Ixodes dammini

I. Pacificus

Ixodes ricinus

I. Presulcatus

I. Dammin

1982 1978 (24)

(*odocoileus virginianus*): 27%

(*Peromyscus Leucopus*): 10%

(*Tamias striatus*): 17%

(*sciurus carolinensis*): 50%

(*Didelphis virginiana*): 17%

(*Procyon lotor*): 23%

%24 : āŸȮŏă

ŏÅȒŒĞŏă ÿăÆęɉă ğăæ ɸŋ ǥøüʐ 20 ɸŋ ǥÆǵăş ǥøüʐ ʔÆŏ ÿÆŏă ʔÀƒ ɸŋ ĞÅʐǪŸţă ğắÀÅǪȅă
.(8) (2) Ğŏʐ ĦÅţă

ɉǕ ÆDZş :ƙÊɸÂȮÊÅş Ž ğÅɸăʐƐΣă ȜƐĞŏ ƙȞęʐŋ ɸŋ āŸõ ɸŋ ǥæʐǹüŋ ĞÆȝ 380 ɸŋ
8 ʔÆŏ ÿÆŏă ɸŋ ôÀŧţă ŌŋÅȞŏă ắÀÅɸȅăşÛɄȝÅţă ĘŏüǪŏă øÅĞǪǹɍ ÅƐăÅƶǕ ǨŸȝÅÅǨ ÅȚÅŋ %53
.(12) ÅĞŸõ 111 ɸŋ āŸõ

1988 ÿÅȝ āŸȮŏă ɸŋ ĞÆȝ 2409 ȌĦÅŏ ȼÊÅɸ øÅĞǪǹɍă ɃÀDZǕ :Texas âÅÊȮǨ Ž
ɸŋ ŌÔţă ɄøăÅƶɋă āŸȮŏă ɸŋ ÆÅÆȞŏă ɉÅõ .ĞƐăÅƶǕ ǰəÅǪɸ ɸȝ (%5.5) ÅȚÅŋ 132 ğÀǪǕş
.(14) ĞÅÀĪĞŏă ğɍÅĦŸŏ ȜõɉăĞĞÊÅŏă ǨŸDzȅ ǬƐǵ ĞÅɍʐŏă ɸŋ ʔÛȅʐŏă ĞƐŏÅŧĪŏă ĞŌÛÅţă
Ž .I. Dammini *ɄøÆŋăÆŏă ắʐĞŸŏă* ŌĞę ɸŋ ȟÆŸŏ øÀȮǪŋ ŌȮĪă ôÀȞǪǨ ȯʐƐʅă ɉǕ Şǵʐŏ
Ž ĞʐşÀȞŋ Ğɸʐüʐŋ ĞŌÛÅŋ Ž Ʉəăʐĩȝ ŌȮĪă ǥÅŌǪÅŋ ÅɸÅȮǵ 50 øŏ ĞƐDZʐŏşƘȅ Ğȅăøắ
.ÀìÅĞţă ƘɖɄȝÅţă ĘŏüǪŏă øÅĞǪǹɍ ÅƐăÅƶǕ ÅȚÅŋ 13 ŌȝÅÅǨ ÛǥÆĦǪţă ğÅÅɍʐŏă
:"ăÂƐŏǕ" ǨÂɸɉÅă ȔĞǨÀţă ɄȝÅţă ÂǪŧţă ĞÊÅÅŌŋ ĞŌÅÀù ÿăÆÅǪȅÅă ÀǹǕ ɄDZʐŏşƘȅ ĜÊŋ Ž
6ş Ûî ʐĦÅŋ ɉÅȎǵ 100 ɸŋ âắÊŏă ÀȚĪŏă Ž øÅĞǪǹɍă ĞƐăÅƶǕ ǨɸÅõ ÅɸÅȮǵ 13 ɉǕ ÆDZş
ĞŋắÅę ȻØȽ ȯʐƐʅă Ǩɸõ .(%7) 91 ɸŋ (11) 10 ÀȚĪŏă Ž øÅĞǪǹɍă ĞƐăÅƶǕ ǨɸÅõ ĞÅȎǵǕ
ĞÅɍş ɸŋ ĞŋắÅÖŏă ȯʐƐʅă Ž ắăÆȑɉă ğÅăÅDzǪȅă Àǩăʐǩ ɉÅõ .ĞƐȮÅÅŋǕ ĞƐęÀì ğÅɍş 5 ɸŋ
ĞŸȝÅÅǪŋ ȯʐƐǹ ÆDZăʐǪǨ Ɓ ŌăÅŌţÅăş .(6) ÅƐɸÅÅŸÊɸÅă ĞÅɍş ɸŋ ĞŋắÅÖŏă ŌŸǨ ɸȝ ʔŸȝǕ ɄȅÀDZʐƐɸ
.(15) âÅÊȮǨ Ȕȅş Ž

erythema ǥÀDZÅȚţă ʔŋÅŧΣă :ǥÂƐŧţă ĞÅÆŸɘă Ğʐɇă ÀȚȚǨ :ɉÅÊɸɋă ʔÆŏ ǫşÆΣă
ǾǹüǨ ĞüÅÛǵ şǕ ŏăÀƥ ĞȞŌĞă Ğʐɇă ÛÆĞǨ .ắăÀŌŏă ĞɖÆŏ ÆȞă Åŋʐ 20-3 ȯŸǹ migrans (EM)
Æę .ĞƐŌŸǵ ʔŋÅƥ ŌȮĪǪş Ğʐɇă ÂõÀŋ ÆĦĪÅş ǴȑăşŌȮĪă ȣăʐΣă ȔÛÅǪǨ .ȜȅʐǪŏÅă
Æę .ȴÊɘă ɸŋ ʔÀǹɉă ŏăÂDZɉă ʔŸȝ ÀȚȚǨ ĞÅʐɸÅǪ ğÅʐǕ ŌȮì ʔŸȝ ĞÊõÅɸ ʔŋÅŧΣă ɉʐȮǨ
ÿɍǕ şǕ ĞÊĞƐǪŋ ĞĞęø şǕ ţăÆȮŏă şǕ ʔŧΣă şǕ Ǭȝ Æŏă Ȝŋ ȜƐăȅǕ ǥÆȞŏ ĞÅÆŸɘă ğÅʐɇă ĘʐăÀǪǨ
.ĞƐÅŧŸŏă ÆŌȞŏă ȴÅȒǨ şǕ ĞƐŸÔÅŋ ÿɍǕ şǕ ĞƐŸȒȝ

multiple

(8)

405 249

(8)

30-10 doxycycline

ceftriaxone

(15)

ELISA Western blot

[illegible] Wells) [illegible] 17 [illegible] 27 [illegible] .(*et al* 1993

[illegible] *Ixodes dammini* [illegible] *I. Ricinus* [illegible] .(5) [illegible] *I. Pucificus* [illegible] (8) [illegible] *I. Holocyclus* [illegible] .[illegible] *I. Persulcatus* [illegible]

[illegible] 110 [illegible] (%19) 21 [illegible] .(*I. Dammini* [illegible]) [illegible]

[illegible] *I. Dammini* [illegible] 143 [illegible] (%21) 30 [illegible] 66 [illegible] (%26) 17 [illegible] 148 [illegible] %50 [illegible] .(Steere *et al* 1983) [illegible] *I. Pacificus* [illegible] %2 [illegible] (7) [illegible]

[illegible] (*Peromyscus Leucopus* [illegible]) [illegible]

Apodemus [illegible] .*Clethrionomys* [illegible] *Sylvaticus* [illegible] .(11) [illegible]

[illegible] (*odocoileus virginianus*) [illegible] biotope [illegible] .(23) [illegible]

[illegible] .(8) (1) [illegible]

[illegible]

[illegible] 1993 [illegible] 142 [illegible] Steve etal

[illegible] (BSK) Burbour, Stoener, Kelly [illegible] 56 [illegible] [33] [illegible] IgG [illegible] IgM [illegible] 3-2 [illegible] IgM [illegible] ELISA [illegible] [8] IgG [illegible] [8] [illegible]

[illegible]

[illegible] footwears [illegible]

[illegible]

[illegible] Tickicides [illegible] [13] [illegible] 3 [illegible]

Anderson, J.F. Epizootiology of *Borrelia* in *Ixodes* tick vectors and reservoir hosts. *Rev Infect Dis* 11(Suppl):1451–1459, 1989.

Anderson, J.F., L.A. Magnarelli. Spirochetes in *Ixodes dammini* and *Babesia microti* on Prudence Island, Rhode Island. *J Infect Dis* 148:1124, 1983.

Anderson, J.F., L.A. Magnarelli. Avian and mammalian hosts for spirochete-infected ticks and insects in a Lyme disease focus in Connecticut. *Yale J Biol Med* 57:627–641, 1984.

Barbour, A.G. Isolation and cultivation of Lyme disease spirochetes. *Yale J Biol Med* 57:521–525, 1984.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bernard, W.V., D. Cohen, E.M. Bosler, D. Zamos. Serologic survey for *Borrelia burgdorferi* antibody in horses referred to a mid-Atlantic veterinary teaching hospital. *J Am Vet Med Assoc* 196:1255–1258, 1990.

Bosler, E.M., J.L. Coleman, J.L. Benach, *et al.* Natural distribution of the *Ixodes dammini* spirochete. *Science* 220:321–322, 1983.

Bosler, E.M., B.G. Ormiston, J.L. Coleman, *et al.* Prevalence of the Lyme disease spirochete in populations of white-tailed deer and white-footed mice. *Yale J Biol Med* 57:651–659, 1984.

Bruhn, F.W. Lyme disease. *Am J Dis Child* 138:467–470, 1984.

Burgdorfer, W., A.G. Barbour, S.F. Hayes, *et al.* Lyme disease—A tickborne spirochetosis? *Science* 216:1317–1319, 1982.

Burgdorfer, W., S.F. Hayes, D. Corwin. Pathophysiology of the Lyme disease spirochete, *Borrelia burgdorferi*, in ixodid ticks. *Rev Infect Dis* 11(Suppl 6):1442–1450, 1989.

Burgess, E.C. Natural exposure of Wisconsin dogs to the Lyme disease spirochete (*Borrelia burgdorferi*). *Lab Anim Sci* 36:288–290, 1986.

Chu, H.J., L.G. Chavez, B.M. Blumer, *et al.* Immunogenicity and efficacy study of a commercial *Borrelia burgdorferi* bacterin. *J Am Vet Med Assoc* 201:403–411, 1992.

Cohen, N.D., C.N. Carter, M.A. Thomas, Jr., *et al.* Clinical and epizootiologic characteristics of dogs seropositive for *Borrelia burgdorferi* in Texas: 110 cases (1988). *J Am Vet Med Assoc* 197:893–898, 1990.

Cohen, N.D., F.C. Heck, B. Heim, *et al.* Seroprevalence of antibodies to *Borrelia burgdorferi* in a population of horses in central Texas. *J Am Vet Med Assoc* 201:1030–1034, 1992.

Charmot, G., F. Rodhain, C. Perez. Un cas d'arthrite de Lyme observé en France. *Nouv Presse Med* 11:207–208, 1982.

Gerster, J.C., S. Guggi, H. Perroud, R. Bovet. Lyme arthritis appearing outside the United States: A case report from Switzerland. *Brit Med J* 283:951–952, 1981.

Hanrahan, J.P., J.L. Benach, J.L. Coleman, *et al.* Incidence and cumulative frequency of endemic Lyme disease in a community. *J Infect Dis* 150:489–496, 1984.

Hayes, S.F., W. Burgdorfer, A.G. Barbour. Bacteriophage in *Ixodes dammini* spirochete, etiological agent of Lyme disease. *J Bacteriol* 154:1436–1439, 1983.

Johnson, R.C., F.W. Hyde, C.M. Rumpel. Taxonomy of the Lyme disease spirochetes. *Yale J Biol Med* 57:529–537, 1984.

Johnson, R.C., F.W. Hyde, A.G. Steigerwalt, D.J. Brenner. *Borrelia burgdorferi* sp. nov.: Etiologic agent of Lyme disease. *Int J Syst Bacteriol* 34:496–497, 1984.

Kazmierczak, J.J., F.E. Sorhage. Current understanding of *Borrelia burgdorferi* infection, with emphasis on its prevention in dogs. *J Am Vet Med Assoc* 203:1524–1528, 1993.

Madigan, J.E., J. Teitler. *Borrelia burgdorferi* borreliosis. *J Am Vet Med Assoc* 192:892–896, 1988.

Magnarelli, L.A., J.F. Anderson, W. Burgdorfer, W.A. Chappel. Parasitism by *Ixodes dammini (Acari: Ixodidae)* and antibodies to spirochetes in mammals at Lyme disease foci in Connecticut. USA. *J Med Entomol* 21:52–57. 1984.

Oliver, J.N., M.R. Owsley, H.J. Hutcheson, *et al.* Conspecificity of the ticks *Ixodes scapularis* and *I. dammini (Acari: Ixodidae)*. *J Med Entomol* 30:54–63, 1993.

Russell, H., J.S. Sampson, G.P. Schmid, *et al.* Enzyme-linked immunosorbent assay and indirect immunofluorescence assay for Lyme disease. *J Infect Dis* 149:465–470, 1984.

Schmid, G.P. The global distribution of Lyme disease. *Rev Infect Dis* 7:41–50, 1985.

Schulze, T., G.S. Bowen, E.M. Bosler, *et al. Amblyomma americanum*: A potential vector of Lyme disease in New Jersey. *Science* 224:601–603, 1984.

Stanek, G., G. Wewalka, V. Groh, *et al.* Differences between Lyme disease and European arthropod-borne *Borrelia* infections. *Lancet* 1(8425):401, 1985.

Steere, A.C. Borrelia burgdorferi (*Lyme disease, Lyme borreliosis*). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Steere, A.C., J. Green, R.T. Schoen. Successful parenteral penicillin therapy of established Lyme arthritis. *N Engl J Med* 312:869–874, 1985.

Steere, A.C., R.L. Grodzicki, A.N. Kornblatt, *et al.* The spirochetal etiology of Lyme disease. *N Engl J Med* 308:733–744, 1983.

Steere, A.C., S.E. Malawista. Cases of Lyme disease in the United States: Locations correlated with distribution of *Ixodes dammini*. *Ann Intern Med* 91:730–733, 1979.

Stevens, R., K. Hechemy, A. Rogers, J. Benach. Fluoroimmunoassay (FIAX) for Lyme disease antibody. Abstracts, Annual Meeting of the American Society for Microbiology, March 3–7, 1985.

Stewart, A., J. Glass, A. Patel, G. Watt, A. Cripps, R. Clancy. Lyme arthritis in the Hunter Valley. *Med J Aust* 1:139, 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Current Trends Update: Lyme disease and cases occurring during pregnancy—United States. *MMWR Morb Mortal Wkly Rep* 34:376–378, 383–384, 1985.

Wells, S.J., M. Trent, R.A. Robinson, *et al.* Association between clinical lameness and *Borrelia burgdorferi* antibody in dairy cows. *Am J Vet Res* 54:398–405, 1993.

White, D.J., H.G. Chang, J.L. Benach, *et al.* The geographic spread and temporal increase of the Lyme disease epidemic. *JAMA* 266:1230–1236, 1991.

Wilkinson, H.W. Immunodiagnostic tests for Lyme disease. *Yale J Biol Med* 57:567–572, 1984.

Oliver, J.N., M.R. Owsley, H.J. Hutcheson, *et al.* Conspecificity of the ticks *Ixodes scapularis* and *I. dammini (Acari: Ixodidae)*. *J Med Entomol* 30:54–63, 1993.

Russell, H., J.S. Sampson, G.P. Schmid, *et al.* Enzyme-linked immunosorbent assay and indirect immunofluorescence assay for Lyme disease. *J Infect Dis* 149:465–470, 1984.

Schmid, G.P. The global distribution of Lyme disease. *Rev Infect Dis* 7:41–50, 1985.

Schulze, T., G.S. Bowen, E.M. Bosler, *et al.* *Amblyomma americanum*: A potential vector of Lyme disease in New Jersey. *Science* 224:601–603, 1984.

Stanek, G., G. Wewalka, V. Groh, *et al.* Differences between Lyme disease and European arthropod-borne *Borrelia* infections. *Lancet* 1(8425):401, 1985.

Steere, A.C. Borrelia burgdorferi (*Lyme disease, Lyme borreliosis*). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Steere, A.C., J. Green, R.T. Schoen. Successful parenteral penicillin therapy of established Lyme arthritis. *N Engl J Med* 312:869–874, 1985.

Steere, A.C., R.L. Grodzicki, A.N. Kornblatt, *et al.* The spirochetal etiology of Lyme disease. *N Engl J Med* 308:733–744, 1983.

Steere, A.C., S.E. Malawista. Cases of Lyme disease in the United States: Locations correlated with distribution of *Ixodes dammini*. *Ann Intern Med* 91:730–733, 1979.

Stevens, R., K. Hechemy, A. Rogers, J. Benach. Fluoroimmunoassay (FIAX) for Lyme disease antibody. Abstracts, Annual Meeting of the American Society for Microbiology, March 3–7, 1985.

Stewart, A., J. Glass, A. Patel, G. Watt, A. Cripps, R. Clancy. Lyme arthritis in the Hunter Valley. *Med J Aust* 1:139, 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Current Trends Update: Lyme disease and cases occurring during pregnancy—United States. *MMWR Morb Mortal Wkly Rep* 34:376–378, 383–384, 1985.

Wells, S.J., M. Trent, R.A. Robinson, *et al.* Association between clinical lameness and *Borrelia burgdorferi* antibody in dairy cows. *Am J Vet Res* 54:398–405, 1993.

White, D.J., H.G. Chang, J.L. Benach, *et al.* The geographic spread and temporal increase of the Lyme disease epidemic. *JAMA* 266:1230–1236, 1991.

Wilkinson, H.W. Immunodiagnostic tests for Lyme disease. *Yale J Biol Med* 57:567–572, 1984.

MELIOIDOSIS !ŊjƳƐƥǁƐ

ƷƳƑƬǁƐŊj ǢƑƟǁƐ !ŊjƳƐƥǁƐ ICD -10 A24.1

!ŊjƳƐƥǁƐ ǄǅǄ ŋjƥƢǂƈ ǘƑǀ ƪƈ A24.3 ǗǄǅǄȒǅǁƐŊj ǢƑƟǁƐ ǀƟƗ !ŊjƳƐƥǁƐ A24.2

ICD-10 A24.1 acute and fulminating melioidosis;
A24.2 subacute and chronic melioidosis; A24.3 other melioidosis

.Rodent glanders ȏǿÀǑǟ ȳÀʒÀǟ ǕWhitmore ǿʐȶĿǩȘ ǒǟǻ :ǧÀʐǻǟÀʈǟ

(*Malleomycetes*) *Pseudomonas Pseudomallei*

P. Mallei

.(Thomas and Forbes-Faulkner, 1981) 30

.(Dance 1991, Ismail *et al*., 1991)

Guam

Aruba

(Benenson 1990; Galimard and Dodin, 1982

.(Dance, 1991 a

1969-1965 ... %9 ... (Piggott, 1976) ...

(CDC, 1977). ...

1965 ... Kanai) 1988 ... 1967 ... 1000 ... (and Dejsirilert, 1988

(Purrie, 1993). ...

(Aruba ... 13 ... *Macaca fascicularis* ... 50 ... (Dance ...

(*et al.*, 1992.

...

[illegible] (Kanai and [illegible] %30 [illegible] .Dejsirilert, 1988)

[illegible]

[illegible] (Kanai and [illegible] .Dejsirilert, 1988)

[illegible] 16 [illegible] 6 [illegible] .(Webling, 1980)

[illegible] Concurrent [illegible] %70 [illegible] .(Dance, 119/b) [illegible] 2: 3 [illegible]

%50

.(White *et al.*, 1989)

Primates

90 25

(Sutmoller *et al.*,

(Laws and .1957)

.Hall, 1964)

8 17397 159) 3

%40

.(Ketterer *et al.*, 1986) .%34

(13

%33.3-%14.5

Reactor

clay

.(Webling, 1980)

abrasion



Xenopsylla cheopis

Aedes aegypti

Allergenic

(Appasskaj *et al.*, 160: 1 ≤

.1990)

.(Dance, 1991)

(1993)

ELISA

%49.3 antitoxin

%6

.(Ismail *et al.*, 1991)

(Boot

Appassakij, H., K.R. Silpapojakul, R. Wansit, M. Pornpatkul. Diagnostic value of the indirect hemagglutination test for melioidosis in an endemic area. *Am J Trop Med Hyg* 42:248–253, 1990.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Biegeleisen, J.Z., Jr., M.R. Mosquera, W.B. Cherry. A case of human melioidosis. Clinical, epidemiological and laboratory findings. *Am J Trop Med Hyg* 13:89–99, 1966.

Currie, B. Medicine in tropical Australia. *Med J Aust* 158:609, 612–615, 1993.

Dance, D.A. *Pseudomonas pseudomallei*: Danger in the paddy fields. *Trans R Soc Trop Med Hyg* 85:1–3, 1991a.

Dance, D.A. Melioidosis: The tip of the iceberg? *Clin Microbiol Rev* 4:52–60, 1991b.

Dance, D.A., C. King, H. Aucken, *et al.* An outbreak of melioidosis in imported primates in Britain. *Vet Rec* 130:525–529, 1992.

Galimard, M., A. Dodin. Le point sur la melioidose dans le monde. *Bull Soc Pathol Exot* 75:375–383, 1982.

Hubbert, W.T. Melioidosis: Sources and potential. *Wildl Dis* 5(3):208–212, 1969.

Ismail, G., R. Mohamed, S. Rohana, *et al.* Antibody to *Pseudomonas pseudomallei* exotoxin in sheep exposed to natural infection. *Vet Microbiol* 27:277–282, 1991.

Kanai, K., S. Dejsirilert. *Pseudomonas pseudomallei* and melioidosis, with special reference to the status in Thailand. *Jpn J Med Sci Biol* 41:123–157, 1988.

Kaufman, A.E., A.D. Alexander, A.M. Allen, R.J. Cronkin, L.A. Dillingham, J.D. Douglas, *et al.* Melioidosis in imported nonhuman primates. *Wildl Dis* 6:211–219, 1970.

Ketterer, P.J., B. Donald, R.J. Rogers. Bovine melioidosis in south-eastern Queensland. *Aust Vet J* 51:395–398, 1975.

Ketterer, P.J., W.R. Webster, J. Shield, *et al.* Melioidosis in intensive piggeries in south-eastern Queensland. *Aust Vet J* 63:146–149, 1986.

Laws, L., W.T.K. Hall. Melioidosis in animals in north Queensland. IV. Epidemiology. *Aust Vet J* 40:309–314, 1964.

Piggott, J.A. Melioidosis. *In*: Binford, C.H., D.H. Connor, eds. *Pathology of Tropical and Extraordinary Diseases*. Washington, D.C.: Armed Forces Institute of Pathology; 1976.

Piggott, J.A., L. Hochholzer. Human melioidosis. A histopathologic study of acute and chronic melioidosis. *Arch Pathol* 90:101–111, 1970.

Redfearn, M.S., N.J. Palleroni. Glanders and melioidosis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Smith, M.D., V. Wuthiekanun, A.L. Walsh, T.L. Pitt. Latex agglutination test for identification of *Pseudomonas pseudomallei*. *J Clin Pathol* 46:374–375, 1993.

Strauss, J.M., M.G. Groves, M. Mariappan, D.W. Ellison. Melioidosis in Malaysia. II. Distribution of *Pseudomonas pseudomallei* in soil and surface water. *Am J Trop Med Hyg* 18:698–702, 1969.

Sutmöller, P., F.C. Kraneveld, A. Van der Schaaf. Melioidosis (*Pseudomalleus*) in sheep, goats, and pigs in Aruba (Netherlands Antilles). *J Am Vet Med Assoc* 130:415–417, 1957.

Thomas, A.D., J.C. Forbes-Faulkner. Persistence of *Pseudomonas pseudomallei* in soil. *Aust Vet J* 57:535–536, 1981.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Melioidosis—Pennsylvania. *MMWR Morb Mortal Wkly Rep* 25:419–420, 1977.

Webling, D.D. Genito-urinary infections with *Pseudomonas pseudomallei* in Australian aboriginals. *Trans R Soc Trop Med Hyg* 74:138–139, 1980.

White, N.J., D.A. Dance, W. Chaowagul, *et al.* Halving of mortality of severe melioidosis by ceftazidime. *Lancet* 2:697–701, 1989.

NECROBACILLOSIS [illegible]

[illegible] ICD-10 A 48.8
ICD-10 A48.8 other specified bacterial diseases

[illegible] Calf diphtheria [illegible] schmorl [illegible]

[illegible] *Fusobacterium necrophorum* [illegible] *Bacteriodaceae* [illegible] coccoid [illegible] (Rod [illegible]) [illegible]

[illegible] (*Sphaerophorus pseudonecrophorus* [illegible] validity [illegible] (Holdeman *et al.,* 1984) [illegible] 1970

[illegible] *Bacteriode* [illegible] 6 [illegible] 3 [illegible] 1.7 [illegible] 1 [illegible] (Holdeman *et al.*, 1984) [illegible]

(Fimbriae) Pili

Hooves

20-16 9

(Gradin *et al.*, 1991)

Kirby)

(*et al.*, 1980

Foot rot

(Timoney *et al.*, 1988)

.(Islam and shneerson, 1980)

%1

%2

.(Seidenfeld *et al*., 1982)

prophyromonas

.(Ansimies-Somer and Finegold, 1991)

(Ansimies-Somer & Finegold, 1991) Imipenem

interdigital

Corynebacterium

pyogenes

.(Cottral, 1978) Lenkocidin

.(Berg and Loan, 75)

Timoney et al)

.(1988

19

39

18)

%26

(Finegold, 1982)

(Bartlett and Finegold, 1974)

(Finegold, 1982)

(Guario *et al.,* 1982)

%10 %10 %5

(Piberio, 1980)

9 ... 16 ... (H ... A)

(Stewart *et al*., 1983 a)

(Stewart, 1983 b)

Feedlot

(Timoney *et al*., 1988)

Bartlett, J.G., S.M. Finegold. Anaerobic infections of the lung and pleural space. *Am Rev Resp Dis* 110:56–77, 1974.

Berg, J.N., R.W. Loan. *Fusobacterium necrophorum* and *Bacteroides melaninogenicus* as etiologic agents of foot rot in cattle. *Am J Vet Res* 36:1115–1122, 1975.

Claxton, P.D., L.A. Ribeiro, J.R. Egerton. Classification of *Bacteroides nodosus* by agglutination tests. *Aust Vet J* 60:331–334, 1983.

Cottral, G.E., ed. *Manual of Standardized Methods for Veterinary Microbiology*. Ithaca: Comstock; 1978.

Finegold, S.M. Anaerobic bacteria. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Gradin, J.L., J.A. Stephens, G.E. Pluhar, *et al.* Diversity of pilin of serologically distinct *Bacteroides nodosus*. *Am J Vet Res* 52:202–205, 1991.

Guarino, H., G. Uriarte, J.J. Berreta, J. Maissonnave. Estomatitis necrobacilar en terneros. Primera comunicación en Uruguay. *In*: Primer Congreso Nacional de Veterinaria, Montevideo. Sociedad de Medicina Veterinaria del Uruguay, 1982.

Holdeman, L.V., R.W. Kelley, W.E.C. Moore. Anaerobic gram-negative straight, curved and helical rods. *In*: Krieg, N.R., J.G. Holt. Vol I. *Bergey's Systematic Bacteriology*. Baltimore: Williams & Wilkins; 1984.

Islam, A.K.M.S., J.M. Shneerson. Primary meningitis caused by *Bacteroides fragilis* and *Fusobacterium necrophorum*. *Postgrad Med J* 56:351–353, 1980.

Jousimies-Somer, H.R., S. Finegold. Anaerobic gram-negative bacilli and cocci. *In*: Ballows, A., W.J. Hausler, Jr., K.L. Hermann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Kirby, B.D., W.L. George, V.L. Sutter, *et al.* Gram-negative anaerobic bacilli: Their role in infection and patterns of susceptibility to antimicrobial agents. I. Little-known *Bacteroides* species. *Rev Infect Dis* 2:914–951, 1980.

Ribeiro, L.A.O. Foot-rot dos ovinos: etiologia, patogenia e controle. *Bol Inst Pesq Vet Finamor* 7:41–45, 1980.

Seidenfeld, S.M., W.L. Sutker, J.P. Luby. *Fusobacterium necrophorum* septicemia following oropharyngeal infection. *JAMA* 248:1348–1350, 1982.

Stewart, D.J., B.L. Clark, D.L. Emery, J.E. Peterson, K.J. Fahey. A *Bacteroides nodosus* immunogen, distinct from the pilus, which induces cross-protective immunity in sheep vaccinated against footrot. *Aust Vet J* 60:83–85, 1983a.

Stewart, D.J., B.L. Clark, J.E. Peterson, D.A. Griffiths, E.F. Smith, I.J. O'Donnell. Effect of pilus dose and type of Freund's adjuvant on the antibody and protective responses of vaccinated sheep to *Bacteroides nodosus*. *Res Vet Sci* 35:130–137, 1983b.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

Walker, R.D., D.C. Richardson, M.J. Bryant, C.S. Draper. Anaerobic bacteria associated with osteomyelitis in domestic animals. *J Am Vet Med Assoc* 182:814–816, 1983.

NOCARDIOSIS

A43.1 ICD-10 A43.0

A43.8

ICD-10 A43.0 pulmonary nocardiosis; A43.1 cutaneous nocardiosis; A43.8 other forms of nocardiosis

[illegible] *Actinomycetales* [illegible]

[illegible] (Pier 1997; Land *et al.*, 1991) [illegible] (Land *et al.*, 1991). [illegible]

[illegible] (Beaman *et al.*, [illegible] 81.2% [illegible] 1972-1974 [illegible] 500-1000 [illegible] 1976). [illegible] 3% [illegible] 5.6% [illegible] 10% [illegible] 21 [illegible] 50 [illegible] 1:3.

[illegible] Monkeys [illegible] 26 [illegible] 1980 [illegible] 1976 [illegible] 34 [illegible] (Orchard, 1979). [illegible]

[illegible]

.(Lerner, 1991)

%30 %20

%50

.(Bradsher *et al.*, 1982)

62 (1982)

46

62

6 .Mycetoma

8

43 19

%83

.(Benenson, 1990)

(%85)

.(Beaman *et al.*, 1976)

[illegible] (Beaman and Sugar, 1983) [illegible]

[illegible] 6 [illegible]

[illegible] Beaman and Sugar,) [illegible] .(1983

[illegible] %30 [illegible]

[illegible] Macaqe [illegible] (Menestrina

[5] [illegible] .(Liebenberg and Giddeaus, 1985) [illegible] [4] [illegible] (*Papio* [illegible]) Baboon [illegible] ([illegible]) Cynomolgus [illegible] .(Liebenberg and Gidden, 1985) [illegible]

[illegible] .Stationary [illegible] .(Orchard, 1979) [illegible] .(Lerner, 1991) [illegible] .(Smego and Gallis, 1984) [illegible]

[illegible] (Beaman and Sugar, [illegible] .1983) [illegible]

[illegible]

[illegible]

[illegible] 55 [illegible] (Angeles and Sugar, 1987) [illegible] 54 [illegible] (Boiron &Provost 1990) [illegible]

[illegible] (Pier, 1979) [illegible]

[illegible]

Angeles, A.M., A.M. Sugar. Rapid diagnosis of nocardiosis with an enzyme immunoassay. *J Infect Dis* 155:292–296, 1987.

Beaman, B.L., J. Burnside, B. Edwards, W. Causey. Nocardial infections in the United States, 1972–1974. *J Infect Dis* 134:286–289, 1976.

Beaman, B.L., A.M. Sugar. *Nocardia* in naturally acquired and experimental infections in animals. *J Hyg* 91:393–419, 1983.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Boiron, P., F. Provost. Use of partially purified 54-kilodalton antigen for diagnosis of nocardiosis by Western blot (immunoblot) assay. *J Clin Microbiol* 28:328–331, 1990.

Bradsher, R.W., T.P. Monson, R.W. Steele. Brain abscess due to *Nocardia caviae*: Report of a fatal outcome associated with abnormal phagocyte function. *Am J Clin Pathol* 78:124–127, 1982.

Forbes, G.M., F.A. Harvey, J.N. Philpott-Howard, *et al.* Nocardiosis in liver transplantation: Variation in presentation, diagnosis and therapy. *J Infect* 20:11–19, 1990.

Land, G., M.R. McGinnis, J. Staneck, A. Gatson. Aerobic pathogenic *Actinomycetales*. *In*: Balows, A., W.J. Hausler, K.L. Hermann, H.D. Isenberg, H.J. Shadomy, eds. *Manual of Clinical Microbiology*. 5th ed. Washington, D.C.: American Society for Microbiology; 1991.

Lerner, P.L. *Nocardia* species. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Liebenberg, S.P., W.E. Giddens. Disseminated nocardiosis in three macaque monkeys. *Lab Animal Sci* 35:162–166, 1985.

Orchard, V.A. Nocardial infections of animals in New Zealand, 1976–78. *N Z Vet J* 27:159–160, 165, 1979.

Pier, A.C. *Actinomycetes*. *In*: Stoenner, H., W. Kaplan, M. Torten, eds. Vol 1, Section A: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1979.

Smego, R.A., H.A. Gallis. The clinical spectrum of *Nocardia brasiliensis* infection in the United States. *Rev Infect Dis* 6:164–180, 1984.

PASTEURELLOSIS

ICD-10 A28.0

Shipping ... Shuffles ...

pasteurel ... (Mutters *et al*,. 1985) ... 11 ... Dagmatis ... multocida ... Caballi ... (Schater *et al*., 1989)

[illegible] (Mutters *et* [illegible] generic [illegible] *ActinBacillus* [illegible] *.al*., 1986)

[illegible] A [illegible] %13 [illegible] %3 [illegible] .(Bingharr *et al*., 1990) [illegible]

[illegible] (16-1) [illegible] (E, D, B, A) [illegible] 15 [illegible] (T A) [illegible]

[illegible]

[illegible] 1956 [illegible] 822 [illegible] 316 [illegible] .1965 [illegible] .1968 [illegible] 1965 [illegible]

[illegible]

[illegible] 56 [illegible]

[illegible] dagmatis [illegible] (T) 2 [illegible]

.(Bisgaard and Falsen, 1986) [illegible]

[illegible]

.(Kumar *et al.*, 1990) [illegible]

[illegible] .(Wong *et al.*, 1992) [illegible]

.(Rollof *et al.*, 1992) [illegible]

[illegible]

[illegible] 20 [illegible] 10 [illegible] (Bjokholm and Eilard) [illegible] 5 [illegible] (Ewing *et al.*, 1980) [illegible] 4 [illegible] 40 [illegible] Kumar *et al.*,) [illegible] (1990.

[illegible] Fauces [illegible] 6 [illegible]

[illegible] (Irwin *et al*., 1979) [illegible]

[illegible] *Paramyxovirus* [illegible] (PI3) [illegible]

[illegible]

Rinderpest

Bison

(Carter, 1982) 1967

Sialorrhea

6: E 6: B

2 A

(P13) (Fraser *et al.*, 1982)

[illegible] (Gillespie and Timoney, 1981) [illegible] 120 [illegible] 860 [illegible] (%11) [illegible] (%16) 2 [illegible] (%22) 1 [illegible] (Colin *et al*., 1987) [illegible] %27 [illegible] (%7) 9 [illegible] 5 [illegible] (Blood *et al*., 1979) [illegible]

[illegible] (Hog [illegible] Hepatization [illegible] 3:A [illegible] (Pijoon *et al*., 1983) [illegible] D [illegible]

[illegible] *Bodetella bronchiseptica* [illegible] (Rutter, 1983) [illegible]

[illegible] gnotobiotic [illegible] (Rhodes *et al*., 1987) [illegible]

[illegible] D [illegible] .(Dominick and Rimler, 1986) [illegible] .(Verma, 1988) [illegible] %40 [illegible] 2: B [illegible] Coryza [illegible] (%50) [illegible] 26 [illegible] 52 [illegible] %6 [illegible] %70 [illegible] .(DiGiacomo *et al.*, 1999) [illegible] %60 [illegible]

[illegible] (Wattle) [illegible] 1 [illegible] (Mushin, 1979) [illegible]

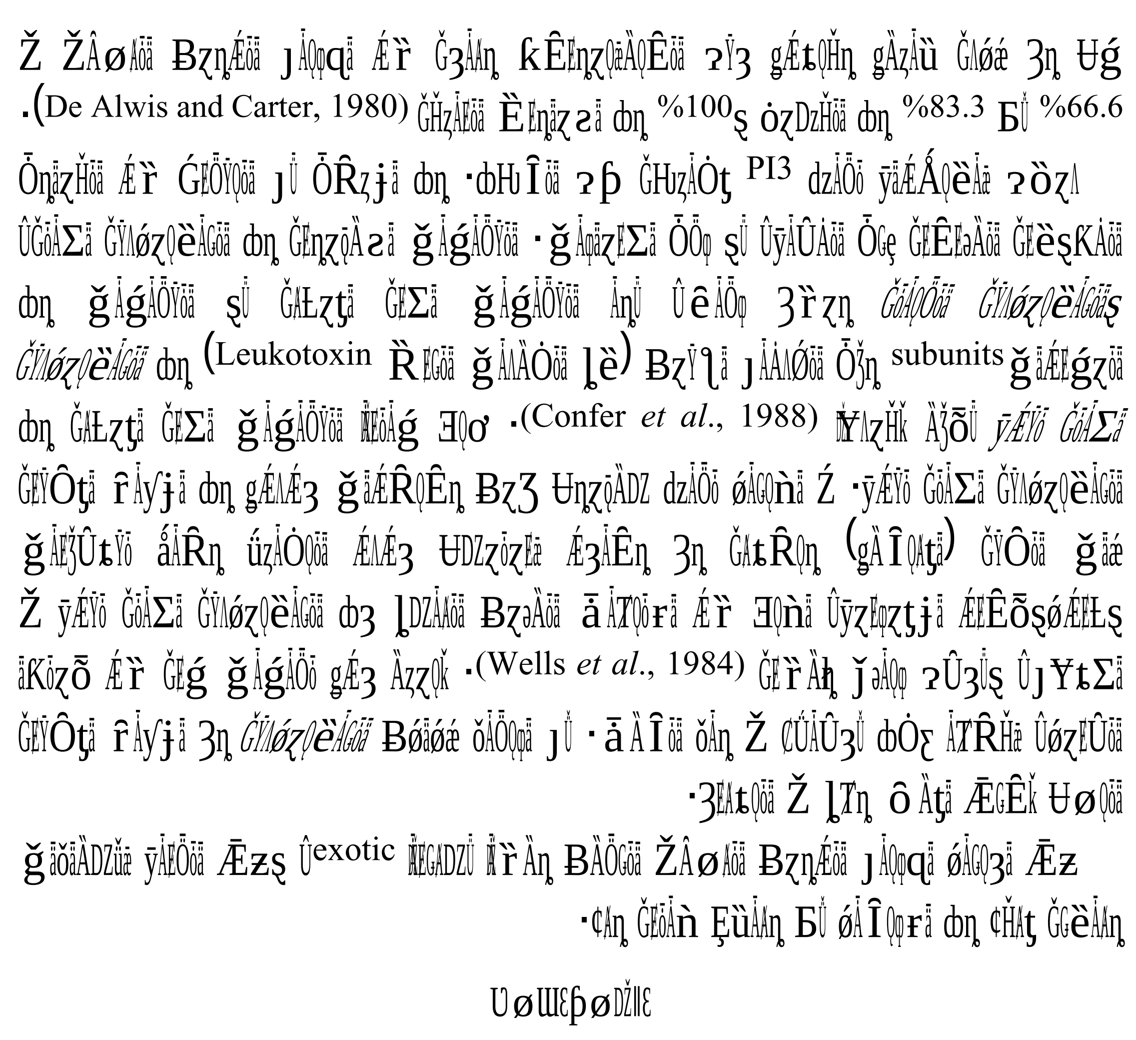
[illegible] %70 [illegible] (%50 [illegible] %20) [illegible] %90 %60) [illegible] .(Kumar *et al.*, 1990) [illegible] %60 [illegible] %86 [illegible] %75 [illegible] 7) [illegible] aerosolization [illegible] .(Kumar *et al.*, 1990) [illegible] (%13 [illegible] 100 [illegible] %69 [illegible] %31 [illegible]

[illegible] .aerosol [illegible]

[illegible]

6: B [illegible] (Krank and Smith, 1983) [illegible]

[illegible]



Bingham, D.P., R. Moore, A.B. Richards. Comparison of DNA:DNA homology and enzymatic activity between *Pasteurella haemolytica* and related species. *Am J Vet Res* 51:1161–1166, 1990.

Bisgaard, M., E. Falsen. Reinvestigation and reclassification of a collection of 56 human isolates of *Pasteurellaceae*. *Acta Pathol Microbiol Immunol Scand [B]* 94:215–222, 1986.

Bisgaard, M., O. Heltberg, W. Fredriksen. Isolation of *Pasteurella caballi* from an infected wound on a veterinary surgeon. *Acta Pathol Microbiol Immunol Scand* 99(3):291–294, 1991.

Bjorkholm, B., T. Eilard. *Pasteurella multocida* osteomyelitis caused by cat bite. *J Infect* 6:175–177, 1983.

Blood, D.C., J.A. Henderson, O.M. Radostitis. *Veterinary Medicine*. 5th ed. Philadelphia: Lea and Febiger; 1979.

Bruner, D.W., J.H. Gillespie. *Hagan's Infectious Diseases of Domestic Animals*. 6th ed. Ithaca: Comstock; 1973.

Burdge, D.R., D. Scheifele, D.P. Speert. Serious *Pasteurella multocida* infections from lion and tiger bites. *JAMA* 253:3296–3297, 1985.

Carter, G.R. Pasteurellosis: *Pasteurella multocida* and *Pasteurella haemolytica* [review]. *Adv Vet Sci* 11:321–379, 1967.

Carter, G.R. Pasteurella infections as sequelae to respiratory viral infections. *J Am Vet Med Assoc* 163:863–864, 1973.

Carter, G.R. Whatever happened to hemorrhagic septicemia? *J Am Vet Med Assoc* 180:1176–1177, 1982.

Colin, R., L. Jaramillo M., F. Aguilar R., *et al.* Serotipos de *Pasteurella haemolytica* en pulmones neumónicos ovinos en México. *Rev Latinoam Microbiol* 29:231–234, 1987.

Confer, A.W., R.J. Panciera, D.A. Mosier. Bovine pneumonic pasteurellosis: Immunity to *Pasteurella haemolytica* [review]. *J Am Vet Med Assoc* 193:1308–1316, 1988.

De Alwis, M.C., G.R. Carter. Preliminary field trials with a streptomycin-dependent vaccine against haemorrhagic septicaemia. *Vet Rev* 106:435–437, 1980.

DiGiacomo, R.F., B.J. Deeb, W.E. Giddens, *et al.* Atrophic rhinitis in New Zealand white rabbits infected with *Pasteurella multocida*. *Am J Vet Res* 50:1460–1465, 1989.

Dominick, M.A., R.B. Rimler. Turbinate atrophy in gnotobiotic pigs intranasally inoculated with protein toxin isolated from type D *Pasteurella multocida*. *Am J Vet Res* 47:1532–1536, 1986.

Ewing, R., V. Fainstein, D.M. Musher, M. Lidsky, J. Clarridge. Articular and skeletal infections caused by *Pasteurella multocida*. *South Med J* 73:1349–1352, 1980.

Frank, G.H., R.G. Marshall. Parainfluenza-3 virus infection of cattle. *J Am Vet Med Assoc* 163:858–859, 1973.

Frank, G.H., P.C. Smith. Prevalence of *Pasteurella haemolytica* in transported calves. *Am J Vet Res* 44:981–985, 1983.

Fraser, J., N.J. Gilmour, S. Laird, W. Donachie. Prevalence of *Pasteurella haemolytica* serotypes isolated from ovine pasteurellosis in Britain. *Vet Rec* 110:560–561, 1982.

Gillespie, J.H., J.F. Timoney. *Hagan's and Bruner's Infectious Diseases of Domestic Animals*. 7th ed. Ithaca: Comstock; 1981.

Harshfield, G.S. Fowl cholera. *In*: Biester, H.E., L.H. Schwarte, eds. *Diseases of Poultry*. 4th ed. Ames: Iowa State University Press; 1959.

Hoerlein, A.B. Shipping fever. *In*: Gibbons, W.J., ed. *Diseases of Cattle*. 2nd ed. Santa Barbara: American Veterinary Publications; 1963.

Hubbert, W.T., M.N. Rosen. *Pasteurella multocida* infection due to animal bite. *Am J Public Health* 60:1103–1108, 1970.

Hubbert, W.T., M.N. Rosen. *Pasteurella multocida* infections. II. *Pasteurella multocida* infection in man unrelated to animal bite. *Am J Public Health* 60:1109–1117, 1970.

Irwin, M.R., S. McConnell, J.D. Coleman, G.E. Wilcox. Bovine respiratory disease complex: A comparison of potential predisposing and etiologic factors in Australia and the United States. *J Am Vet Med Assoc* 175:1095–1099, 1979.

Kumar, A., H.R. Devlin, H. Vellend. *Pasteurella multocida* meningitis in an adult: Case report and review. *Rev Infect Dis* 12:440–448, 1990.

Mair, N.S. Some *Pasteurella* infections in man. *In*: Graham-Jones, O., ed. *Some Diseases of Animals Communicable to Man in Britain*. Oxford: Pergamon Press; 1968.

Mushin, R. Serotyping of *Pasteurella multocida* isolants from poultry. *Avian Dis* 23:608–615, 1979.

Mutters, R., M. Bisgaard, S. Pohl. Taxonomic relationship of selected biogroups of *Pasteurella haemolytica* as revealed by DNA:DNA hybridizations. *Acta Pathol Microbiol Immunol Scand* [B] 94:195–202, 1986.

Mutters, R., P. Ihm, S. Pohl, W. Frederiksen, W. Mannheim. Reclassification of the genus *Pasteurella* Trevisan 1887 on the basis of deoxyribonucleic acid homology with proposals for the new species *Pasteurella dagmatis*, *Pasteurella canis*, *Pasteurella stomatis*, *Pasteurella anatis*, and *Pasteurella langaa*. *Int J Syst Bacteriol* 35:309–322, 1985.

Namioka, S., M. Murata, R.V.S. Bain. Serological studies on *Pasteurella multocida*. V. Some epizootiological findings resulting from O antigenic analysis. *Cornell Vet* 54:520–534, 1964.

Pijoan, C., R.B. Morrison, H.D. Hilley. Serotyping of *Pasteurella multocida* isolated from swine lungs collected at slaughter. *J Clin Microbiol* 17:1074–1076, 1983.

Rhodes, M.B., C.W. New, P.K. Baker, *et al.* *Bordetella bronchiseptica* and toxigenic type D *Pasteurella multocida* as agents of severe atrophic rhinitis of swine. *Vet Microbiol* 13:179–187, 1987.

Rollof, J., P.J. Johansson, E. Holst. Severe *Pasteurella multocida* infection in pregnant women. *Scand J Infect Dis* 24:453–456, 1992.

Rosen, M.N. Pasteurellosis. *In:* Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Rutter, J.M. Virulence of *Pasteurella multocida* in atrophic rhinitis of gnotobiotic pigs infected with *Bordetella bronchiseptica*. *Res Vet Sci* 34:287–295, 1983.

Schlater, L.K., D.J. Brenner, A.G. Steigerwalt, *et al.* *Pasteurella caballi*, a new species from equine clinical specimens. *J Clin Microbiol* 27:2169–2174, 1989.

Verma, N.D. *Pasteurella multocida* B:2 in haemorrhagic septicaemia outbreak in pigs in India. *Vet Rec* 123:63, 1988.

Wells, P.W., J.T. Robinson, N.J. Gilmour, W. Donachie, J.M. Sharp. Development of a combined clostridial and *Pasteurella haemolytica* vaccine for sheep. *Vet Rec* 114:266–269, 1984.

Wong, G.P., N. Cimolai, J.E. Dimmick, T.R. Martin. *Pasteurella multocida* chorioamnionitis from vaginal transmission. *Acta Obstet Gynecol Scand* 71:384–387, 1992.

PLAGUE ǅŇǰƳƑƯǁɛ

ǅŇǰƳƑƯǁɛ **A20.7** Ûǎ Ǌəƥǁɛ ǅŇǰƳƑƯǁɛ **A20.2** ÜĬ ǂǤɋǁɛ ǅŇǰƳƑƯǁɛ **ICD-10 A20.0**

ĬǄǆǷƗǆǕɛ

ICD-10 A20.0 bubonic plague; A20.2 pneumonic plague;
A20.7 septicaemic plague

.Pest ȷʐʒÀÛöä ÛPestilential ǦĿəÀæʐöä ɂȶΣä Ûáʐèɟä ğʐţä ˸ğÀʐáäÀţä

ɄĿş Û*Yersinia Pestis* *ǦĿɸʐʒÀÛöä ǦĿÀèKöä* ʐĿ ȷʐʒÀÛŸö ɄøǤǤÊöä ŌɳÀȞöä ˸ğÀǢǤÊöä

ǦÀʐÔʒ БÜ (Coccobacillary ǦÀøʐÔʒ) ǦÀøʐȮɳ ǦÀʐÔʒ ÛĞõÀĦʊɳ Ƙɖ ȳäÀ8öä ǦĿǤŸè ǦɳʐǫÀǲ

ǨĦȓşÜ ˸ǞǨǯõ ǦĿəÀÀÂĿÀöäş ǦĿÀĿȶĿȮöä ŌɳäʐȞöä ȳşÀÕǨ ɟş ÛƙǤÛę äæ ÀÀʐŸǩ ɃǢǤǩş ÛÀȚŸȮì Ž

[illegible] (Bercovier *et al.*, 1980) *Y. pseudotuberculosis* subsp *petis* [illegible] (1981 [illegible] 7 [illegible])

[illegible] antique [illegible] Orientalis [illegible] *Media evalis* [illegible] Nosography [illegible] °37 [illegible] 45 [illegible] W [illegible] V [illegible] (K [illegible] E) [illegible] .(Butler, 1989) [illegible]

[illegible] .(Benenson, 1990) [illegible]

[illegible] Pandemics [illegible] 100 [illegible] (Justinian [illegible]) 542 [illegible] 25 [illegible] 1946 [illegible]

ȯζǵ ğÅÛȞţä ˙Ōõ ʔŸʒ ·Ʉȑ Åţä ɹÀŐöä ğÅȜǫŸǭ ʔøǪǵ ğÀȽǪèäş [1894] Ž ǥǨǹɟä ÛǥǨǹɟä ǦȞɘÅǄŸö ǦǄȜǪõş ÜÅȚÅŋ ĘŐȞǪöä ǦǤȞòş ǞǄǅ ǦȜǤÀŐǨ ʔÛèζöä øζÔȞöä Ž ţζęζöä ǼȚäş ÀŐȊqǽŋş ÅŐÀǅζǙ āζǄǅş ÅŐÀζǙ āÀqş ÅȮÀŋǙ āζǄǅ Ž ǦȞȜǤü øǘǣ ğǼüζǨ ·ǦȜÔöä

ɹǙ ÅȽõ ·ƁÅȞöä Ž ȸõÅŋɟä ȴȚȞŋ Ž (ǥÀÛȆÊöä ǨƠ ʒȑş) ɃÀȒΣä ɹζʒÅÛöä ǦȞζÅȮŋ Ź ÅȆÊȜşǼǙ Ž ǦÅǣşǙ ǨǭǼǵ Ȭöǣ ȴqøş ·ÅȒǙ ʒǄäÀǨ Ǽę ɃǿüȮòǙ ȸŋ ɄÀÀöä ɹζʒÅÛöä ǦǄäǼöä ɹäǣÀƨä ʒŋ ȓŸǪǹɍä ǦǄȜǪǫ [1967] ÿÅʒ ǦöÅǵ [5274] ōÅȽ ·ÿÅǪȜζ āζǄǅş ȯǦȜǫş [30] Ž ɃÀȊǦöä ɹζʒÅÛöä ȸŋ ǦöÅǵ [46937] ŌȜǄÊǨ Ź [1979] ƃǙ [1958] ÿÅʒ ǾÅŋş ·ÅȚǮȜqäÀǣş ƃǙ ÿÅǪȜζ Ž ǨǦȮöä åǼȞöä ɃÂʒ ·ÿÅǪȜζ ÅȜǮǫèä äǽǙ [15785] ƃǙ ƃÅƤqä åǼȞöä ʒǄäÀǪ ·ǞǼŸǣ ȸŋ [16] ɹÅõ ʔÀǹǙ ǦȜǵÅǫ ȸŋ ·Ȭöǣ ǨŸǨ ɄøǪöä ǦȜǤöä ğɍǼǪöäş ōÅȽ ǦÀȮÊȞöä ğÅŸȽȞöä ȬŸǨ Ž ʔȑÀţä ţζęş ˙Ōõ ʔŸʒ ·ÅŐÀζǙ Ž ɹζʒÅÛöä ğɍÅǵ ȸʒ Ǩ8ǣ ɄøǪöä ǞǼŸǣ [30] ŌȮȊöä) ÀȚȚÀ ·(Akier, 1982) ɄţÅȞöä ƃÅƤqä ȸŋ %6 ȸŋ Ōęǚş ǞǄǅ ǞȒÅǺŋ ɹÅõ ǥøÅŐöä

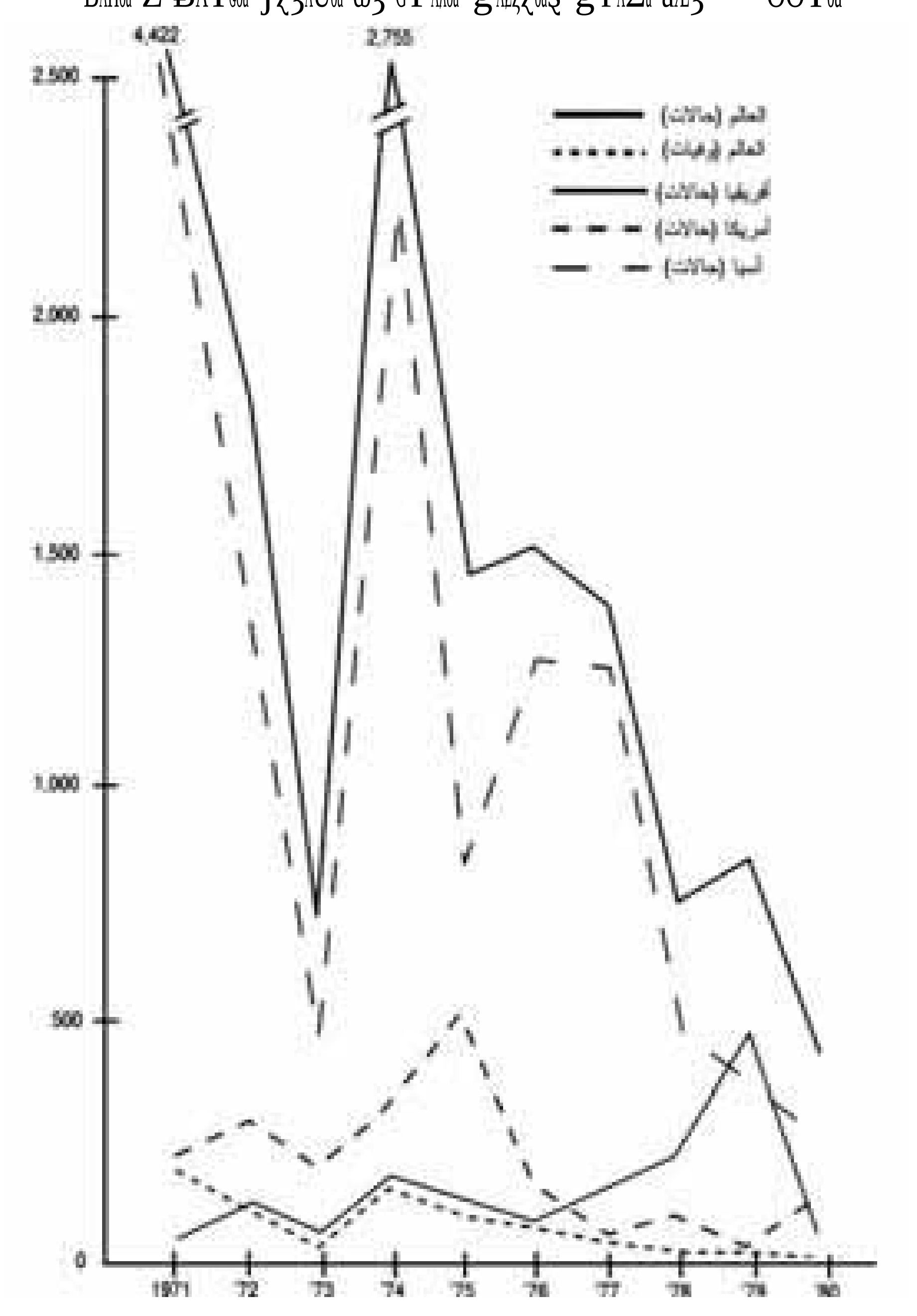
·1980 ƃǙ 1971 ÿÅʒ ǾÅŋ ƁÅȞöä Ž ɃÀȊǦöä ɹζʒÅÛöä ȸʒ ǦƤÅöä ğÅȜζζöäş ğɍÅΣä åǼʒ (14 ǞǼŸǣ 21 Ž ǦʒàζŋǥÅζş 1.391 ʒŋ ǦöÅǵ 14752: 1991 ƃǙ 1977 ȸŋ ɹζʒÅÛöä ţζęş ȸȽȒǨ ·(WHO, 1993)

[1719] ƃÅƤǙ åǼʒ ǦǣÅòǙ ʒŋ ÅŐÀζǙ Ž ğɍÅΣä Ž ǥǨǦõ ǥåÀà ōÅȽ ɹÅõ [1991] ÿÅʒ Ž [1293] ǩǣ ǥÅζş [60] ǨǭǼǵ ˙ǼŸǦöä Ȭöǣ Žş ·ɄÊȜøǙ ŌȮȊǣ ÅȜǫÂøǨ Ž ǦȜȉÅζ ǦǄȜǪǫ ǦȽÊǫ ÀŐȊqǽŋ Ž ÅȚÅʒ ŋȜŸǦǪöä Ź ǦöÅǵ [137] ōÅȽ ɹÅõ ÅȽõ ·ÅƱÅǨ ȴȜęǙ Ž ÅȚÅŋ [1060] ǫǼǵ ÛǦöÅǵ ·(WHO, 1993) ǨǣäàŽ [289]ş

[29] ÛÿÅǪȜζ Ž [94] øÅȽȜǫÅŋ Ž ǦöÅǵ [100] ōÅȽ ɹÅõ ·ǥÅζş [15] ʒŋ ǦöÅǵ [226] ōÅȽ ˙ÅȜèǙ Ž ·ȸÀÀǹǙ ȸÀǼŸǣ Ž ɄęÅǦöäş (ǥÅζş [11] ʒŋ) ǩÔöä Ž

ÛşǨǣ ÛøşåäζõqäÛŌÀäÀƎöä ÛÅȜÅȜöζǣ ˙ǩǪȮÀÀŋɟä Ž ɹäǼŸǣ [7] Ž ɹζʒÅÛöä ǼǄäζǪÀ Ž ǦöÅǵ [2312] ōÅȽ ·(Akeiv, 1982) ƳÀşÂøÅζş ÅǦŋζöζõ ǞǪÅǵǚş ÛǥǼȞǪţä ğÀÀɍζöäş Ž [316] ÛŌÀäÀƎöä Ž ÅȚÅŋ [1551] ǫǼǵ (2 ȯşǼƨä) 1980-1971 ǥÀǪÀöä ȯƳǹ ǩǪȮÀÀŋɟä ğşÅÅǨ ·(PAHO, 1981) øşåäζõɟä Ž [75] ÛǥǼȞǪţä ğÀÀɍζöä Ž [123] ÛÅȜÅȜöζǣ Ž [247] ÛşǨǣ ğÅȜȉÅζ ǨǭǼǵ ǞǪÅǵüζ ÛʔÀǹǙ ƃǙ ǦÀè ȸŋ ǨǦõ ŌȮȊäş ɹäǼŸǦöä Ōõ Ž ğɍÅΣä åǼʒ

ÆĢÊæ ƙǪÈÒΛÀɳɟä Ž (ǦɳÅʒ ǦÆɄò) ǦɳÅȞöä ǦɄÔöä Ž ǦŸÒÎɳ ŌÒÎΛ ɹʐʒÅÛöä ȯäà Åɳ ·ǦÆəÅæʂ ǦÆìÅʐ ǨǪÆǵ ˙øʂåäʐȭqä Ž ·ǦΛƎöäʂ ǦÃDZäÆöä ȏøäʐȪöä ƙæ ǦŸÔöäʂ ɄDZÀΣä ɹʐʒÅÛöä ǦɳäÆǪȅä ÅƬÃÒÊΛ ǥƘȣò ǦΛÀȩ ɄȽʂ ÛʂäåøʐǤȶÆì ɭÆŸȩǕ Ûȱ̈äÂÆɸ Ž 1976 ȄɳÅʅä ÀƬÎöä Ž ğɍÅǵ 7 ȸɳ ɄøǪöäğÅȞÆĢȪöä Ž ğÅÆʐʐöä ȯÆȞɳ ʒÅǩøäʂ ɹäæÀƨä Ž ƘĢȭ ȣäʐÊæ ǦÆìÅÀöä ǨȪĢȅ ·ȀÀùÅȩ 850 ·ɃÅȞöä Ž ɃÀÎĢöä ɹʐʒÅÛöä ȸʒ ǦƤÅÀöä ğÅÆʐʐöäʂ ğɍÅΣä åÆʒ :14 ŌÒÎöä



الجدول 2: عدد الحالات والوفيات الناجمة عن الطاعون البشري في الأمريكتين 1971-1980

البلد	1971		1972		1973		1974		1975		1976		1977		1978		1979		1980	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
بوليفيا	19	3	0	0	0	0	14	5	2	0	24	5	29	9	68	2	10	0	26	2
البرازيل	146	2	169	13	152	...	291	...	496	5	97	...	1	...	11	...	0	0	98	0
الإكوادور	27	0	9	0	1	1	0	0	0	0	8	1	0	0	0	0	0	0	0	0
البيرو	22	5	118	15	30	2	8	2	3	0	1	0	0	0	6	1	0	0	0	0
الولايات المتحدة الأمريكية a	2	0	1	0	2	0	8	1	20	4	16	3	18	2	12	2	13	2	18	5
الإجمالي	216	10	297	28	185	3	321	8	521	9	146	9	48	11	97	5	23	2	142	7

C: حالات

D: الوفيات

...: المعطيات غير متوفرة

a: الطاعون موجود في القوارض

المصدر: Bull Epidemiol PAHO 1981 3-4(1)

1984 ... 1966 ... 40 ... 289 ... (Rust, 1985).

1983 ... 35 ... 5 ... 1925 ...

10 ... 1991 ... 21 ... 1992 ... (WHO, 1993) ... 11 ... 4) ... 13 ... 8 ... (OPS, 1992) ... 5 ... 1 ... 4 ... 13 ... 3-2) ... (CDC, 1992) ... (Benenson, 1990) 1924 ...

1992 ... 19 ... 547 ... 30000 ... 9 ... (1994 ... (*Cavia Porcellus*) ... (1994,8 ...

[illegible] 230 [illegible]

[illegible] 1982-1966 [illegible] 861 [illegible] 236 [illegible] 471 [illegible] 152 *Ornithodorus* [illegible] 2 [illegible] *Zygodontomys lasiarus pixuna* [illegible] *Polygenis* [illegible] (Ctenocephalides felis [illegible] 10 [illegible] (*Pulex irritans* [illegible] (Almeida *et al*., 1985).

[illegible] 119 [illegible] (Kaufmann *et al*., 1981, Rollay *et al*., 1981) [illegible]

1988-1977) … .(Eidson *et al.*, 1991)

….(Christie *et al.*, 1980) …

… 6-2 … Bubonic … Slurred … Staggering …

… (Buboes … %60 … %25 … .(Pestis minor

.(Bulter, 1988) …

… %100 …

[illegible] 1925 [illegible] (CDC, 1982) 1980 [illegible] 3 [illegible] (CDC, 1992) [illegible] %95 [illegible] .(Poland and Barners, 1979)

[illegible]

[illegible] Rodentia [illegible] Rabbits [illegible] (Lagomorphs [illegible]) Hares [illegible] Rattus [illegible] (Commensal [illegible] epizootics

[illegible] *Cittellus beecheyi* [illegible] (*Cynomys* [illegible] Peromyscus [illegible] *Microtus* [illegible]

[illegible] Feline [illegible] (Rollay *et al*., 1981) [illegible] %50 [illegible]

[illegible] Barnes) [illegible] (Christie *et al* 1980) [illegible]

[illegible] (15 [illegible]

(Bico *et al.*, %85 ȯÆĤŋ ğÅƮƤ ǬōÅǭ ȣāƺè ÒŌǬŞ ÛȸÅƮì Ž ɈāƺĔǵ 1500-1000 Æęş ·Û ţƺÅōā āǾĿ Ž ôÅŌǩ Åŋ ĀĤÅè ʔşÆĤōā ɈÛ ɍÛ ÛĀÆǅ ÆĤǪÊŋ *æÅǅɟā æÅƨā* 1988)
ğāƺÂÊō ÈĔō ȸȮō ¯ ÆƮā Ž ǫÆǵ ÅȶÕ ¯ ÙŌƺ ȣşÅŢā ȒĤæ Žş ĶęűŋɃƺǯÕ ŌȶĤ ĞŋşÅŌţā ȸŋ Ʒèāş ƷĔù ÅƮÆō ɄøǪōā ôǿāƺŌōā ţāƺǫÛ ʔŸȝ ğǿúÅ ǒÅŌæ ÆȶǪĤ ƂÅǪōÅæş ·ĞŸƺù
·ĞĔəÂƨā

·ĞǅāÆōā ȼĞìş ĞǅāÆōā ȯÅŌǬɍā ĞŌŸǵ ·ɈƺȝÅÛōā :15 ŌȮÎōā

ţāƺǫÛ ğşÅÅǪǩ ·Fleas ǬĔȡāƎōā Ǝȝ ÅǹÛ ƂÛ ȸəÅÕ ȸŋ ʔşÆĤōā ŌŌǪǩ :ĞĔĤĔĞù ğǿúæ Ž
ǿÅÔǵǭā ğÅĿÅŢæ ĞÅƺĔΣā ŌęāƺÅōā ÂĔȶǩ ·ŌęÅÕ ÅƮǪĔāĤƺ Ž ƘĞÕ ŌȮÎæş ǬĔȡāƎōā ȸŋ ĞÅŸǪƲ
Ž ŌŋÅĤōā ƷȝÅȒǪÅ ÛɃƺŋÆōā ɈÅǭǭȡæ āÅŌŋ Ƀƺǭ ÿáŽ *ĞĔèƘōā ȝŸǪǩ* ÅŋÆȝ ·Blocking
ÅŋÆȝş ·ĿĔāÅƨā ȸŋ ĞŸǪȮæ ğƺÎŢ Proventriculum ğÆĤţā ÿÆŌŋ ĞĞÔǩş ǫƺȡƎōā ğÆĤŋ
āǾĿş) ÆÅÆƨā ɃƺǯŸō ÿÆōā ʔÅƒ ƂÛ ĿĔāÅƨā ÈŸŌÅ ȼǭúƺ ĞĔǭÅǭ ʔǾȣǪÅ ɈÛ ƺÎŢ ǫƺȡÅæ ȯşÅȝ
ĞÅƎōā ôǿāƺŌōā ǬĔȡāÅæ ·(ȸǅāÆōā æÅƨā ǫƺȡÅæ :*xenopoyllo cheopia* *Žƺʅā ĿŸöɟā* ȯÅǵ
ɈƺȮÅ Æę ɄȮĔǭÅȮĔţā ȯÅŌǬɍā ɈÛ ÆŌǪĤÅ ·ĞǩşÅÅǪŋ ĞÅƺĔǵ ŌęāƺÅō ÅőǿÆęş ÛĞŋÅȝ ğǒÅÕ Ōęǒ
ʔşÆĤōā ŌŌǩ ɈÛ ÅƮÅȮƺşÛĀÆǅ ţƺÅŸō ĞĔȝƺǭ ĶÊĔō ŌęāƺÅōā ȻǾĿ ɈÛ ÅȶÕ ·ĞĔĤĔĞù ǿúæ Ž ĀȶƮŋ
ĀĔǵ ɄøĞĞÊōā ŌŋÅĤōā ʔŌĞÅ · ğÅǭāƺΣÅæ ĞÅùƺǪŋ ĞŌÛÅŋ Ž Ì ĔĤǩ ôǿāƺŌōā ȸŋ ĞÅŸǪƲ ţāƺǫÛ ƙæ
ǬĔȡāƎōā ƎǪĤǩ Æę ÆĞÊōā āǾƬş ·Āŋƺ 396 ğÆŋ ĀÅÆĤÅŋ ɄŌæ ÅƮȒĤæ ÛǬĔȡāƎōā Ž ĞŸÅƺù ğÆŋ
200 ȸŋ ÅǯŌÛ ĿőĀ ·ɃǿÅŌƺ ¯ ɄŸÔÅŋ ÆŌÅŋ ɈƺȮÅ Æę ɃǾōāş ÛɄĤĔĞÛōā ţǻƺǪÊţā ȸŋ ĀōÅǅ

Commensal

(marsupials

(*Monodelphis domestica*)

Polygenis bohlsi jordani

100 1959

.1971 40 1968

Zotic

ectoparasites

Demic

%2.2

buboes (1979 1930)

demic

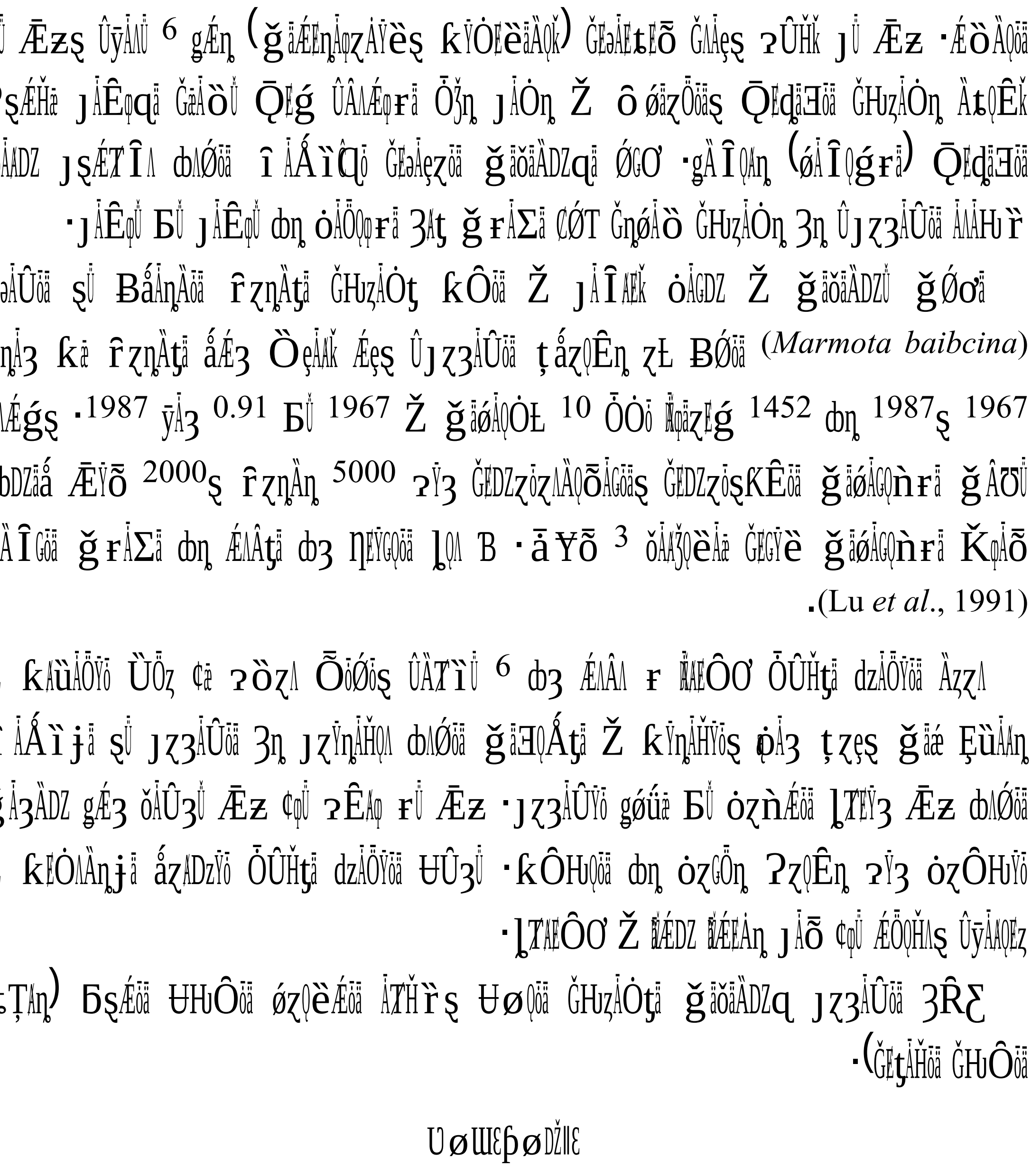
gelatinous

F1

(Williams *et al.*, 1986)

[illegible] native [illegible] sentinel [illegible] Sentinel [illegible] Coyote [illegible] (Wileberg *et al.*, 1979) [illegible] Restrospective [illegible] F1 [illegible] (Mc Donough *et al.*, 1988) [illegible]

[illegible] ecology [illegible]



Akiev, A.K. Epidemiology and incidence of plague in the world, 1958–79. *Bull World Health Organ* 60:165–169, 1982.

Almeida, A.M.P. de., D.P. Brasil, F.G. de Carvalho, C.R. de Almeida. Isolamento da *Yersinia pestis* nos focos pestosos do nordeste do Brasil no periodo de 1966 a 1982. *Rev Inst Med Trop Sao Paulo* 27:207–218, 1985.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bercovier, H., H.H. Mollaret, J.M. Alonso, J. Brault, G.R. Fanning, A.G. Steigerwalt, *et al.* Intra- and interspecies relatedness of *Yersinia pestis* by DNA hybridization and its relationship to *Yersinia pseudotuberculosis*. *Curr Microbiol* 4:225–229, 1980.

Butler, T. Plague. *In*: Warren, K.S., A.A.F. Mahmoud, eds. *Tropical and Geographical Medicine*. New York: McGraw-Hill; 1984.

Butler, T. The black death past and present. 1. Plague in the 1980s. *Trans R Soc Trop Med Hyg* 83:458–460, 1989.

Christie, A.B., T.H. Chen, S.S. Elberg. Plague in camels and goats: Their role in human epidemics. *J Infect Dis* 141:724–726, 1980.

Davis, D.H.S., A.F. Hallett, M. Isaacson. Plague. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Dinger, J.E. Plague. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Eidson, M., J.P. Thilsted, O.J. Rollag. Clinical, clinicopathologic, and pathologic features of plague in cats: 119 cases (1977–1988). *J Am Vet Med Assoc* 199:1191–1197, 1991.

Hudson, B.W., M.I. Goldenberg, J.D. McCluskie, H.E. Larson, C.D. McGuire, A.M. Barnes, *et al*. Serological and bacteriological investigations of an outbreak of plague in an urban tree squirrel population. *Am J Trop Med Hyg* 20:225–263, 1971.

International Committee on Systemic Bacteriology. List 7. Validation of the publication of new names and new combinations previously effectively published outside USB. *Int J Syst Bacteriol* 31:382–383, 1981.

Judicial Commission of the International Commitee on Systemic Bacteriology. Opinion 60. Rejection of the name *Yersinia pseudotuberculosis* subsp. *Yersinia pestis* (Lehmann and Neumann) van Loghem 1944 for the plague bacillus. *Int J Syst Bacteriol* 35:540, 1985.

Kartman, L., M.I. Goldenberg, W.T. Hubbert. Recent observations on the epidemiology of plague in the United States. *Am J Public Health* 56:1554–1569, 1966.

Kaufmann, A.F., J.M. Mann, T.M. Gardiner, F. Heaton J.D. Poland, A.M. Barnes, *et al*. Public health implications of plague in domestic cats. *J Am Vet Med Assoc* 179:875–878, 1981.

Lu, C.F. [Epidemiologic significance of the eradication of the gray marmot (*Marmota baibacina*) in natural foci in the mountains of Tienshan, in Hutubi District, Xinjang]. *Bull Endem Dis* 5:4–18, 1990–1991.

McDonough, K.A., T.G. Schwan, R.E. Thomas, S. Falkow. Identification of a *Yersinia pestis*-specific DNA probe with potential for use in plague surveillance. *J Clin Microbiol* 26:2515–2519, 1988.

Meyer, K.F. Pasteurella and Francisella. *In*: Dubos, R.J., J.G. Hirsch, eds. *Bacterial and Mycotic Infections of Man*. 4th ed. Philadelphia: Lippincott; 1965.

Olsen, P.F. Sylvatic (wild rodent) plague. *In*: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Organización Panamericana de la Salud (OPS). Enfermedades sujetas al Reglamento Sanitario Internacional. *Bol Epidemiol* 13:16, 1992.

Pan American Health Organization (PAHO). *Health Conditions in the Americas, 1969–1972*. Washington, D.C.: PAHO; 1974. (Scientific Publication 287).

Pan American Health Organization (PAHO). Status of plague in the Americas, 1970–1980. *Epidemiol Bull* 2:5–8, 1981.

Pan American Health Organization (PAHO). *Plague in the Americas*. Washington, D.C.: PAHO; 1965. (Scientific Publication 115).

Pavlovsky, E.N. *Natural Nidality of Transmissible Diseases*. Urbana: University of Illinois Press; 1966.

Poland, J.D., A.M. Barnes. Plague. *In*: Stoenner, H., W. Kaplan, M. Torten, eds. Vol 1, Section A: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1979.

Pollitzer, R. A review of recent literature on plague. *Bull World Health Organ* 23:313–400, 1960.

Pollitzer, R., K.F. Meyer. The ecology of plague. *In*: May, J.M., ed. *Studies in Disease Ecology*. New York: Hafner Pub. Co.; 1961.

Rollag, O.J., M.R. Skeels, L.J. Nims, J.P. Thilsted, J.M. Mann. Feline plague in New Mexico: Report of five cases. *J Am Vet Med Assoc* 179:1381–1383, 1981.

Rust, J.H. Plague research in northern Peru. PAHO/WHO report, June 1985.

Stark, H.E., B.W. Hudson, B. Pittman. *Plague Epidemiology*. Atlanta: US Centers for Disease Control and Prevention; 1966.

Tirador, D.F., B.E. Miller, J.W. Stacy, A.R. Martin, L. Kartman, R.N. Collins, *et al*. Plague epidemic in New Mexico, 1965. An emergency program to control plague. *Public Health Rep* 82:1094–1099, 1967.

Ubico, S.R., G.O. Maupin, K.A. Fagerstone, R.G. McLean. A plague epizootic in the white-tailed prairie dogs (*Cynomys leucurus*) of Meeteetse, Wyoming. *J Wildl Dis* 24:399–406, 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Human plague—United States, 1981. *MMWR Morb Mortal Wkly Rep* 31:74–76, 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Pneumonic plague—Arizona, 1992. *MMWR Morb Mortal Wkly Rep* 41:737–739, 1992.

Willeberg, P.W., R. Ruppanner, D.E. Behymer, H.H. Higa, C.E. Franti, R.A. Thomson, *et al*. Epidemiologic survey of sylvatic plague by serotesting coyote sentinels with enzyme immunoassay. *Am J Epidemiol* 110:328–334, 1979.

Williams, J.E., L. Arntzen, G.L. Tyndal, M. Isaacson. Application of enzyme immunoassays for the confirmation of clinically suspect plague in Namibia, 1982. *Bull World Health Organ* 64:745–752, 1986.

World Health Organization (WHO). *WHO Expert Committee on Plague. Fourth Report*. Geneva: WHO; 1970. (Technical Report Series 447).

World Health Organization (WHO). Human plague in 1991. *Wkly Epidemiol Rec* 68(4):21–23, 1993.

PSEUDOTUBERCULOUS YERSINIOSIS

ICD-10 A28.2

ICD10 A28-2 extraintestinal yersiniosis

Pseudotuberculosis Yarsinia

[illegible] °37 [illegible] °25 [illegible] coccobacillary [illegible] DNA [illegible] (6-1) [illegible] (O) [illegible] (Svhiemonn 1989) [illegible] 5-4-2-1 [illegible] (O: IC) 0: 1 [illegible] (Tsuboku *et al* 1993) 11 [illegible] (Galyov *et al.*, 1993) [illegible]

[illegible]

[illegible] 3 [illegible] 117 [illegible] (Schiemonn, 1989) [illegible]

[illegible] (Tertti *et al.*, 1959) [illegible] 19 [illegible] 3 [illegible] (Stovell, 1980) [illegible] 1984-1982 [illegible] 16 [illegible] 5a [illegible] 2C [illegible] (Inone *et al.*, 1988) [illegible] 4b

[illegible] 1991 [illegible] 134 [illegible] 732 [illegible] 33 (%81.8) 27 [illegible] 5a [illegible] .Autoagglutination [illegible] 37° [illegible] .(Toyokowa *et al*, 1993) [illegible] 3.2.1 [illegible] 6 [illegible] 5 [illegible] 4 [illegible] .(Qian *et al*., 1981)

[illegible] 1 [illegible]

[illegible] %66.7 [illegible] %73.8 [illegible] 478 [illegible] %86 [illegible] %63.4 6 [illegible] .(Tertti *et al* 1984) [illegible] 19 [illegible] 1 [illegible] 4 [illegible] 6 [illegible] 12 [illegible] 1 [illegible]

[illegible] 3 [illegible]

(Lemaitre, 1980)

(Lemaitre, 1991)

%75-%5

(Noseda *et al.*, 1987)

1

3

(Slee and Skilbeck, 1992)

14

(Slee and Button, 1990)

0: 3 0: 1 (Slee and Button, 1990) Conditioning

.(Witte *et al.*, 1985)

3 35 26 20

(Slee *et al.*, 1988)

.(Collinon *et al.*, 1988) 0: 3

%1.7 %5.8

%0.6

70

.0: 3 (Noseda *et al.*, 1990)

.(Willner-Pendleton and Coper, 1983)

%15-%2 12-9

Cannibalism

[illegible]

[illegible] (*Oryctolagus cuniculus*) [illegible] (*Lepus eurppaeus*) [illegible] (*columba palumbus*) [illegible] (*rattus norvegicus* [illegible])

[illegible] (*Myocastor Coypus*) [illegible] nutria [illegible] (O: 1) [illegible] (Monteavaro *et al.,* 1990) (Cipolla *et al.,* 1987) [illegible] Patagonian mara [illegible] (*Dolichotis patagonum*) 1a [illegible] %0.79-%0.66 [illegible] 2a [illegible] 1b [illegible] (Porsons, 1991).

[illegible] (*Saimri* [illegible] (*Cercopithecus aethiops* [illegible] *sciureus*) [illegible] (Plesker and Claros, 1992) [illegible] (O: 2) [illegible] New World [illegible] (Brack and Gatesman 1991; Brack *et al.*, 1992) [illegible] (O: 1)

[illegible] (16 [illegible]) [illegible]

(*Urotrichus* mole ... *Geothenomys* ... *Apodemus* ... 1.530

... 10 ... 72 ... *talpoides*)

... (Fukushimo *et al.*, 1990) ...

... 37 ... 259 ... 610

... (%0.8) ... 2 ... (%5.6) ... 34

... (%14) ...

... (*Nyctereutes Procyonoides*) ... Omnivorous ...

(Fukushimo Gomyoda *et al.*, 1991) ...

... 1.6 ...

... %4.3 ... %5.8 ...

... 163 ... 480 ...

... %2 ... (Weber and Knapp, 1981) ...

... %0.8 ...

(Shiazawa *et al.,* (4b 1985 ... 4b ... 1989) 14 ... 12.6 ... %0.58 ... Fukushima ... (Weber-Knapp; 1981) ... 50 ... %84 ... 509 ... (%26.3) 134 ... 1 ... (%93.2) ... 3 ... (Hodges and Corman, 1985) ...

... 2 ... (Aldova *et al.,* 1979) ... 1 ... 1989-1983 ... (Dziubak *et al.,* 1991) *Muridae* ... epornitic ...

(*Columba Polumbus*)

(Wallner *et al*; 1983)

(Tertti *et al*., 1984) 19

vehicle

(Carniel and molleret, 1990)

(Fukushima, 1985)

Aldova, E., A. Brezinova, J. Sobotkova. A finding of *Yersinia pseudotuberculosis* in well water. *Zbl Bakt Hyg [B]* 169:265–270, 1979.

Bercovier, H., H.H. Mollaret, J.M. Alonso, J. Brault, G.R. Fanning, A.G. Steigerwalt, *et al.* Intra and interspecies relatedness of *Yersinia pestis* by DNA hybridization and its relationship to *Yersinia pseudotuberculosis*. *Curr Microbiol* 4:225–229, 1980.

Brack, M., T.J. Gatesman [*Yersinia pseudotuberculosis* in New World monkeys]. *Berl Munch Tierarztl Wochenschr* 104:4–7, 1991.

Brack, M., F. Hosefelder. *In vitro* characteristics of *Yersinia pseudotuberculosis* of nonhuman primate origin. *Zentralbl Bakteriol* 277:280–287, 1992.

Callinan, R.B., R.W. Cook, J.G. Boulton, *et al.* Enterocolitis in cattle associated with *Yersinia pseudotuberculosis* infection. *Aust Vet J* 65:8–11, 1988.

Carniel, E., H.H. Mollaret. Yersiniosis [review]. *Comp Immunol Microbiol Infect Dis* 13:51–58, 1990.

Cipolla, A.L., P.E. Martino, J.A. Villar, M. Catena. Rodenciosis en nutrias (*Myocastor coypus*) de criadero: primeros hallazgos en Argentina. *Rev Argent Prod Animal* 7:481–486, 1987.

Dziubak, V.F., A.S. Maramovich, I.I. Lysanov, R.N. Liberova. [The epidemiological patterns of pseudotuberculosis in Khabarovsk Kray]. *Zh Mikrobiol Epidemiol Immunobiol*. October (10):25–28, 1991.

Fukushima, H. Direct isolation of *Yersinia enterocolitica* and *Yersinia pseudotuberculosis* from meat. *Appl Environ Microbiol* 50:710–712, 1985.

Fukushima, H., M. Gomyoda. Intestinal carriage of *Yersinia pseudotuberculosis* by wild birds and mammals in Japan. *Appl Environ Microbiol* 57:1152–1155, 1991.

Fukushima, H., M. Gomyoda, S. Kaneko. Mice and moles inhabiting mountainous areas of Shimane Peninsula as sources of infection with *Yersinia pseudotuberculosis*. *J Clin Microbiol* 28:2448–2455, 1990.

Galyov, E.E., S. Hakansson, A. Forsberg, H. Wolf-Watz. A secreted protein kinase of *Yersinia pseudotuberculosis* is an indispensable virulence determinant. *Nature* 361(6414): 730–732, 1993.

Hodges, R.T., M.G. Carman. Recovery of *Yersinia pseudotuberculosis* from faeces of healthy cattle. *N Z Vet J* 33:175–176, 1985.

Inoue, M., H. Nakashima, T. Ishida, M. Tsubokura. Three outbreaks of *Yersinia pseudotuberculosis* infection. *Zbl Bakt Hyg [B]* 186:504–511, 1988.

Joubert, L. La pseudo-tuberculose, zoonose d'avenir. *Rev Med Vet Lyon* 119:311–322, 1968.

Lemaitre, B.C., D.A. Mazigh, M.R. Scavizzi. Failure of beta-lactam antibiotics and marked efficacy of fluoroquinolones in treatment of murine *Yersinia pseudotuberculosis* infection. *Antimicrob Agents Chemother* 35:1785–1790, 1991.

Mair, N.S. Yersiniosis in wildlife and its public health implications. *J Wildl Dis* 9:64–71, 1973.

Mair, N.S. Yersiniosis (Infections due to *Yersiniosis pseudotuberculosis* and *Yersiniosis enterocolitica*). *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Monteavaro, C., A. Schettino, P. Soto, *et al.* Aislamiento de *Yersinia pseudotuberculosis* en nutrias de criadero. *Rev Med Vet* 71:220–224, 1990.

Noseda, R.P., J.C. Bardón, A.H. Martínez, J.M. Cordeviola. *Yersinia pseudotuberculosis*: epizootia en una colonia de *Cavia porcellus*. *Vet Argent* 4:134–136, 1987.

Noseda, R.P., A.H. Martínez, J.C. Bardón, *et al.* *Yersinia pseudotuberculosis* en bovinos de la Provincia de Buenos Aires. *Vet Argent* 7:385–388, 1990.

Parsons, R. Pseudotuberculosis at the zoological society of London (1981 to 1987). *Vet Rec* 128:130–132, 1991.

Plesker, R., M. Claros. A spontaneous *Yersinia pseudotuberculosis* infection in a monkey colony. *Zbl Vet Med [B]* 39:201–208, 1992.

Quan, T.J., A.M. Barnes, J.D. Poland. Yersinioses. *In*: A. Balows, W.J. Hausler, Jr., eds. *Diagnostic Procedures for Bacterial, Mycotic and Parasitic Infections*. Washington, D.C.: American Public Health Association; 1981.

Schiemann, D.A. *Yersinia enterocolitica* and *Yersinia pseudotuberculosis*. *In*: Doyle, M.P. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Shiozawa, K., M. Hayashi, M. Akiyama, *et al.* Virulence of *Yersinia pseudotuberculosis* isolated from pork and from the throats of swine. *Appl Environ Microbiol* 54:818–821, 1988.

Slee, K.J., P. Brightling, R.J. Seiler. Enteritis in cattle due to *Yersinia pseudotuberculosis* infection. *Aust Vet J* 65:271–275, 1988.

Slee, K.J., C. Button. Enteritis in sheep, goats and pigs due to *Yersinia pseudotuberculosis* infection. *Aust Vet J* 67:320–322, 1990.

Slee, K.J., N.W. Skilbeck. Epidemiology of *Yersinia pseudotuberculosis* and *Y. enterocolitica* infection in sheep in Australia. *J Clin Microbiol* 30:712–715, 1992.

Stovell, P.L. Pseudotubercular yersiniosis. *In*: Stoenner, H., W. Kaplan, M. Torten, eds. Vol 2, Section A: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1980.

Tertti, R., K. Granfors, O.P. Lehtonen, J. Mertsola, A.L. Makela, I. Valimaki, *et al.* An outbreak of *Yersinia pseudotuberculosis* infection. *J Infect Dis* 149:245–250, 1984.

Toyokawa, Y., Y. Ohtomo, T. Akiyama, *et al.* [Large scale outbreak of *Yersinia pseudotuberculosis* serotype 5a infection at Noheji-machi in Aomori Prefecture]. *Kansenshogaku Zasshi* 67:36–44, 1993.

Tsubokura, M., S. Aleksic, H. Fukushima, *et al.* Characterization of *Yersinia pseudotuberculosis* serogroups O9, O10 and O11; subdivision of O1 serogroup into O1a, O1b, and O1c subgroups. *Zentralbl Bakteriol* 278:500–509, 1993.

Wallner-Pendleton, E., G. Cooper. Several outbreaks of *Yersinia pseudotuberculosis* in California turkey flocks. *Avian Dis* 27:524–526, 1983.

Weber, A., W. Knapp. [Seasonal isolation of *Yersinia enterocolitica* and *Yersinia pseudotuberculosis* from tonsils of healthy slaughter pigs]. *Zbl Bakt Hyg A* 250:78–83, 1981a.

Weber, A., W. Knapp. [Demonstration of *Yersinia enterocolitica* and *Yersinia pseudotuberculosis* in fecal samples of healthy slaughter swine depending on the season]. *Zbl Vet Med B* 28:407–413, 1981b.

Wetzler, T.F. Pseudotuberculosis. *In*: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Witte, S.T., D.P. Sponenberg, T.C. Collins. Abortion and early neonatal death of kids attributed to intrauterine *Yersinia pseudotuberculosis* infection. *J Am Vet Med Assoc* 187: 834, 1985.

RAT BITE FEVER

A25.1 A.25.0 ICD-10

ICD-10 A25.0 Spirillosis, A25.1 streptobacillosis

streptobacillus moniliformis .*Spirillum minus (minor)*

1.

1. Infection due to *Streptobacillus moniliformis*

0.7-0.1 5-1 150-10 %20 .(Savage, 1984)

.1926 ... 304 ... %43 ...
.(McEvoy *et al.,* 1987)

... 4 – 2 ... %10 ...

.(Washburn, 1990) ...

.(McEvoy *et al.,* 1987)

[illegible] (1987)

[illegible]

[illegible] (Benenson, 1990) [illegible]

[illegible]

[illegible] .(Wilkins *et al.,* 1988)

[illegible]

[illegible] .2
2. Infection due to *Spirillum minus*

.spirillary [illegible] Sodoko [illegible]

[illegible] .(Krieg, 1984) [illegible] 0.2 [illegible] 5-3 [illegible]

[illegible]

[illegible] %25 [illegible]

[illegible] 4 – 1 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Anderson, L.C., S.L. Leary, P.J. Manning. Rat-bite fever in animal research laboratory personnel. *Lab Anim Sci* 33:292–294, 1983.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bisseru, B. *Diseases of Man Acquired from His Pets*. London: Heinemann Medical; 1967.

Boyer, C.I., D.W. Bruner, J.A. Brown. A *Streptobacillus*, the cause of tendo-sheat infection in turkeys. *Avian Dis* 2:418–427, 1958.

Krieg, N.R. Aerobic/microaerophilic, motil, helical/vibroid gram-negative bacteria. *In*: Krieg, N.R., J.G. Holt, eds. Vol. 1: *Bergey's Manual of Systematic Bacteriology*. Baltimore: Williams & Wilkins; 1984.

McEvoy, M.B., N.D. Noah, R. Pilsworth. Outbreak of fever caused by *Streptobacillus moniliformis*. *Lancet* 2:1361–1363, 1987.

Ruys, A.C. Rat bite fevers. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Savage, N. Genus *Streptobacillus*. *In*: Krieg, N.R., J.G. Holt, eds. Vol. 1: *Bergey's Manual of Systematic Bacteriology*. Baltimore: Williams & Wilkins; 1984.

Washburn, R.G. *Streptobacillus moniliformis* (Rat-bite fever). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Wilkins, E.G.L., J.G.B. Millar, P.M. Cockroft, O.A. Okubadejo. Rat-bite fever in a gerbil breeder. *J Infect* 16:177–180, 1988.

Yamamoto, R., G.T. Clark. *Streptobacillus moniliformis* infection in turkeys. *Vet Rec* 79:95–100, 1966.

RHODOCOCCOSIS [illegible]

[illegible] ICD-10 J15.8
ICD-10 J15.8 other bacterial pneumonia

[illegible] *Rhodococcus* (*coryebacterum* [illegible]) *equi* [illegible] **Actinomycetales** [illegible] 14 [illegible] 4 [illegible] %60 [illegible] 3 [illegible] 2. (Timoney *et al.,* 1988).

[illegible] 17-15 [illegible] (Prescott, 1991) [illegible] (Takai *et al.*, 1991a) [illegible]

1923 .(Barton and Hughes, 1980)

1977 .(Van Etta *et al.*, 1983) 13 1983 1990 – 20 .(Prescott, 1991) 1983

.(Barton and Hughes, 1980)

(Prescott, 1991).

[illegible] %88 AIDS [illegible] (%20 [illegible] %54.5) [illegible] .(Prescott, 1991; Harvey and Sunstrum, 1991) [illegible] %75 (Harvey and [illegible] %61 [illegible] .Sunstrum, 1991)

[illegible] 4 – 2 [illegible] 6 – 2 [illegible] 6 [illegible] .(Yager, 1987) [illegible]

[illegible] %50 [illegible]

[illegible] (Yager, 1987).

[illegible] 89 [illegible] %26) [illegible]

[illegible] .(

[illegible]

[illegible] 10-4 [illegible]

[illegible] (Barton and Hughes, 1980).

[illegible] (Fraser *et al.,* 1991) [illegible]

[illegible] (Takai *et al.,* 1991b) [illegible] (%82) [illegible] (%64) [illegible] (%83) [illegible] (%97) [illegible] (%89) [illegible] (%76) mares [illegible]

(Carman and Hodges, 1987) (%94)

(Mutimer *et al.*, 1979) 521 2

32 2

(Prescott, 1991)

(Takai *et al.*, 1986; Hietala *et al.*, 1985;

Yager, 1987)

HIV

(Presott, 1991)

[illegible] (Faser *et al.*, 1991) [illegible]

[illegible]

Barton, M.D., K.L. Hughes. *Corynebacterium equi*: A review. *Vet Bull* 50:65–80, 1980.

Carman, M.G., R.T. Hodges. Distribution of *Rhodococcus equi* in animals, birds and from the environment. *N Z Vet J* 35:114–115, 1987.

Fraser, C.M., J.A. Bergeron, A. Mays, S.E. Aiello, eds. *The Merck Veterinary Manual*. 7th ed. Rahway: Merck; 1991.

Harvey, R.L., J.C. Sunstrum. *Rhodococcus equi* infection in patients with and without human immunodeficiency virus infection. *Rev Infect Dis* 13:139–145, 1991.

Hietala, S.K., A.A. Ardans, A. Sansome. Detection of *Corynebacterium equi*-specific antibody in horses by enzyme-linked immunosorbent assay. *Am J Vet Res* 46:13–15, 1985.

Mutimer, M.D., J.B. Woolcock, B.R. Sturgess. *Corynebacterium equi* in human faeces. *Med J Aust* 2:422, 1979. Cited in: Prescott, J.F. *Rhodococcus equi*: An animal and human pathogen. *Clin Microbiol Rev* 4:20–34, 1991.

Prescott, J.F. *Rhodococcus equi*: An animal and human pathogen. *Clin Microbiol Rev* 4:20–34, 1991.

Takai, S., K. Koike, S. Ohbushi, *et al.* Identification of 15- to 17-kilodalton antigens associated with virulent *Rhodococcus equi*. *J Clin Microbiol* 29:439–443, 1991a.

Takai, S., S. Ohbushi, K. Koike, *et al.* Prevalence of virulent *Rhodococcus equi* in isolates from soil and feces of horses from horse-breeding farms with and without endemic infections. *J Clin Microbiol* 29:2887–2889, 1991b.

Takai, S., H. Ohkura, Y. Watanabe, S. Tsubaki. Quantitative aspects of fecal *Rhodococcus* (*Corynebacterium*) *equi* in foals. *J Clin Microbiol* 23:794–796, 1986.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

Van Etta, L.L., G.A. Filice, R.M. Ferguson, D.N. Gerding. *Corynebacterium equi*: A review of 12 cases of human infection. *Rev Infect Dis* 5:1012–1018, 1983.

Yager, J.A. The pathogenesis of *Rhodococcus equi* pneumonia in foals. *Vet Microbiol* 14:225–232, 1987.

SALMONELLOSIS [illegible]

AO201 [illegible] **ICD -10 AO2.0** [illegible] **AO 208** [illegible]

ICD-10 A02.0 salmonella enteritis; A02.1 salmonella septicaemia;
A02.8 other specified salmonella infections

[illegible]

[illegible] .Enteropacteriaceae [illegible] .°70 [illegible] .8 – 4 [illegible] °45.8 [illegible] 15 [illegible] °71.1 [illegible] %20 [illegible] .(1988 [illegible]

[illegible] 14 – 4 [illegible] *S. typhimurium* [illegible] .(McLaren and Wary, 1991) [illegible] .(el-Gazzar and Marth, 1992) [illegible] °7 [illegible] 10 [illegible]

[illegible] (1987) [illegible] Edwards [illegible]

.(Farmer *et al.*, 1984) [illegible] Ewing [illegible] *Typimurium* [illegible] *enterica* [illegible] I [illegible]

[illegible] Vi [illegible] H [illegible] O [illegible] 2200 [illegible]

[illegible] *pullorum* [illegible] *gallinarum* [illegible] pullarum [illegible] .(D'Aoust, 1989) [illegible]

[illegible] phage [illegible] 137 [illegible] 2010 [illegible] .biotypes [illegible] %52 [illegible] (Barker *et* [illegible] lysotype [illegible] .*al.*, 1980) [illegible]

[illegible]

[illegible] paratyphi A [illegible] paratyphic C [illegible] (Murray, 1986). [illegible]

[illegible] enteritidis [illegible] weltevreden [illegible]

[illegible] 30000 [illegible] 1980 [illegible] (Hargrett-Bean *et al.,* 1988) [illegible] 42028 [illegible] 1986 [illegible] (CDC, 1982). [illegible] %21) 1993 [illegible] 1976 [illegible] 12784 [illegible] 375 [illegible] 1991-1985

ş Ǧåä Ǩǿõ ğɍΣä ȴŢȟŋş Ûgȥş Ǧöǵ 49ş ɂÂÎţä ÂTÂǹåǓ Ź ÂTÂŋ Ǧöǵ 1508 ÛǦöǵ ǦĿφÒŋǓ ɂŸʒ ȯÆ äØĿş ǦĿǫÅȟöä Ùƴ ÈÂφ ȸŋ ÂTÂŋ ÆÆȟöä ȷõ ÛgƘ8ŏ ğŸǝʒ ğÂĿÌȥ .(CDC, 1992a) ɁşäÆȟŸö Æǵäȥöä øÆÔţä

ǴǦŏǓ ·gÆȟǪţä ğɍȥöä ȸŋ Ǧɍş 30 ȸŋ ȌÅì 1900 ȻÂȒǵ 1990 ӯʒ ÂǪűŋ ÆŐʒ øÆÔŋ ȷõ Û*öÅȟŋǪö ǦǤTŸţä ǦŸĿǫȥȶŸÊöÂæ* ŏÅȟŋɉäş gÆȟţä āÂTǪöÂæ ÅȒÂŋ Ōçɉä ɂŸʒ ȴTÂŋ %23 .(CDC, 1990) ĳÆĿǱ ĿÛɫ Ɓ ȼφǓ ŌȶǪʒ ȒĿǦæ ğÆʒǓ ɁȥŸǵ ɁşÆȟöä

ȷõş ÛȌÅì 20000 ǨæŏǓ (gÆȟǪţä ğɍȥöä) äȥÆĿöǓ Ž ǦĿÌȥ ǨǫÆǵ :1985 ӯʒ Ǧŋşőţä gåÆȟǪŋ Ǩǿõ ɄøǪöä *ǦøüÂöä ǦĿÂĿǪöä ǦŸĿǫȥȶŸÊöÂæ* ǫȥŸŋ ÂǪÊǦŋ (ǞĿŸǵ) Əö ÂTǦȅ .(ƙŸÒĿȅäÂǪǪöäş ƙŸÊĿǦŋɉä) ǦȥĿΣä ğäåÂȒȶŸö

gÆʒ Ž 1985-1981 ƙæ Âŋ gÂǪÂöä Ž ǨǫÆǵ ɄøǪöä ğÂĿÌÂÂöä Ȓȟæ (3 ȯşÆƨä) ÂTȚÂ .(1988 Ûğ ŸĿǫȥȶŸÊöä ŏäå ǦȟȥÒŋ ŏäƎǹ Ǧƨ - ǦĿţÅȟöä ǦȟÔöä ǦȶȚÂŋ) ȷäÆŸæ

1985-1981 gøÂǪƯ ȷäÆŸæ Ž ӯÅȟÛöÂæ ȯȥŐţä ğŸĿǫȥȶŸÊöä ŏäå ğÂĿÌȥ :3 ȯşÆƨä

ğɍΣä åÆʒ	ɄŸÔţä Ùȶöä	ӯÅȟÛöä	Ǧöşƙöä	ӯÅȟöä
500	ǦÆĿĿǪφȥţä	ʓÂǱå	äÂǪŸÒφǓ	1981
700	Indiana ÂφÂÆφǓ	åøÂæ ӯÅȟù	gÆŸǩȥÒȅä	1981
654	ǦøüÂöä ǦĿÂĿǪöä	ŏƆ ǞĿŸǵ	gÆŸǩȥÒȅä	1981
245	Napoli Ƃȥæφ	ɍȥõȥì	äÂǪŸÒφǓ	1982
126	Aranienburg ȟƎÆĿøǓ	ŌÂŸȥ	ǰşÂÂöä	1982
274	8ȥǹƘȥ	ƥȥǦÛŋ ȴΣ	äÂǪŸÒφǓ	1984
450	ǦøüÂöä ǦĿÂĿǪöä	Ƀȥ Îŋ ɃÂŐæ ȴΣ	äÂǪŸÒφǓ	1984
2,000	ǦøüÂöä ǦĿÂĿǪöä	ǦǦǱ	äÆÂõ	1984
766	ŏÅȟŋǪö ǦǤTŸţä	ȴȟŸöä ƙǨŸǱ	ɃÅȟöä ŏÂƱǓ Őõ Ž	1984
150	ǦĿŸÂÛöä	ƥȥǦÛŋ ȴΣ	äÂǪŸÒφǓ	1985
60	Ealing ŋÂŸǓ	ʒȑÂŸö gøåȥæ ǞĿŸǵ	äÂǪŸÒφǓ	1985
20,000	ǦøüÂöä ǦĿÂĿǪöä	ÂǪÊǦŋ ǞĿŸǵ	gÆȟǪţä ğɍȥöä	1985

[illegible] 5300000 [illegible] 740000 [illegible] 100000 [illegible] 10 [illegible] (Bryan, 1981) 3/2 [illegible] 3/1 [illegible] 100000 [illegible] 43 [illegible] 100000 [illegible] 44 [illegible] .(Silliker, 1982) [illegible] 1980 [illegible] 48607 [illegible] 1979 [illegible] 40717 [illegible] 1978 [illegible] 33215 [illegible] 32.2 1983-1980 [illegible] .(Poehn, 1982) (D'Aoust, [illegible] 100,000 [illegible] 27 :1985 [illegible] 100,000 .1989

[illegible] 23 [illegible] 7 [illegible] 1984 [illegible] 1974 [illegible] .(Tauxe *et al.*, 1987) [illegible]

[illegible] :1977 [illegible] 640 [illegible] 545 [illegible] (%93) 598 [illegible] *thompson* [illegible] 3429 [illegible] :1974 – 1969 [illegible] .(Gunn and Bullon) [illegible] 932 [illegible] :1972 [illegible] 1969 [illegible] 3429 [illegible] 1972 [illegible] 246 [illegible] %14 [illegible] oranienburg [illegible] %27 [illegible] %73 [illegible]

.(Binsztein *et al.,* 1982) ... 1986 ... 1986 ... 2500 ... 39 ... 1988
.(Eiguer *et al.,* 1990; Rodrigueet *et al.*, 1990)

%1 ... 183 ... 16274 ... 1980 ... %3 (Pietzsch, ... 222160 ... %1.25 ... 1985 ... 1982) ... 81851 ... 4.81 ... 2515 ... 141827 ... 459 ... (CDC, 1982) 1980 ... %7 ... %5 ... %1 ... 1980 ... 3626 ... 1981 ... 2992 ...

... 1983 ... 1967 ... 908 ... %11.2 ... %9.8 ... %12.8 ... %8.4 ... 124774 ... %0.04 ... 672 ... %7.7 ... 29613 ... %0.1 ... 301 ... %13.6
.(D'Aoust, 1989)

72 – 6

4-2

6546

1983 1969

%34 194 %3

%5 %5 %23 %32

.(Wilkins and Roberts, 1988) %3

choleraesuis

[illegible] *abortus equi* [illegible] *pullorum* [illegible] *Dublin* [illegible]

dublin [illegible]

[illegible]

enteriditis *dublin*

choleraesuis 4-2

abortus ovis

.(Timoney *et al.,* 1988)

abortus equi

[illegible] 1990 [illegible] %97.8 [illegible] 1991 [illegible] var. *copenhagen* [illegible] *copenhagen* [illegible] (Bauerfeind *et al.*, 1992) 1991 [illegible].

[illegible]

[illegible] (Trimoney *et al.*, 1988).

[illegible] (Timoney *et al.*, 1988) [illegible] *pullorum* [illegible]

[illegible] *gallinarum* [illegible] *pullorum* [illegible] *gallinarum* [illegible] *pullorum* [illegible]

[illegible] 200 [illegible] (Nagaraja et al., 1991) [illegible] pullorum [illegible] (Nagaraja *et al*., 1991) [illegible]

[illegible] *typimurium* [illegible]

[illegible]

[illegible] (*Larus* [illegible] 227 [illegible] %8.4 [illegible] *argentatus*) [illegible] *montevideo* [illegible] .(Butterfield *et al.*, 1983; Coulson *et al.*, 1983) [illegible]

[illegible] %3.4 [illegible] 974 [illegible] .*dwardsiella* [illegible] (*Arizona hinshawii* [illegible]) *arizanae* [illegible] 195 [illegible] (%11.8) [illegible] .(*Proechimys semispinosus*) [illegible] 704 [illegible] 8 [illegible]

[illegible]

[illegible]

[illegible] 311 [illegible] %37 [illegible] .(%3) [illegible] (%55 [illegible]) [illegible]

[illegible] 24 [illegible] 39 *choleraesais* [illegible] *arizanae*. (Cambre *et al.,* 1980) [illegible]

[illegible] 17 [illegible]

[illegible] 17 [illegible] 400 :1991 [illegible] 7 [illegible] 6 [illegible] *poona* [illegible] (Publ hith news abst hyg [illegible]

[illegible] .Comm. Dis 60 (9): 210, 1991) [illegible] (*typhi* [illegible]) [illegible] 1965 [illegible] 100 [illegible] .(Aserkoff *et al.,* 1970) [illegible] 16000 [illegible] 1980 [illegible] .(D'Aoust, 1989) [illegible] 347 [illegible] %51.3 [illegible] :1983 (Humphrey [illegible] 177 [illegible] %32.2 [illegible] :1985 [illegible] 1984 [illegible] .*et al.,* 1988) 173 [illegible] 4 [illegible] 17 [illegible] 118 [illegible] 3 [illegible] (%0.001 [illegible]) [illegible] .(Stevens *et al.,* 1980) [illegible] 3 [illegible]

marina

(CDC, 1992b) %77 %36

(D'Aoust *et al.*, 1990) *arizanae* Poona

(Mores and Duncan, 1974)

4

14 95

(1991

(CDC, 1991)

pollorum ... *gallinarum* ... *dublin*

[illegible] *pollorum* [illegible]

[illegible] $4 - 2$ [illegible]

[illegible] *Dublin* [illegible]

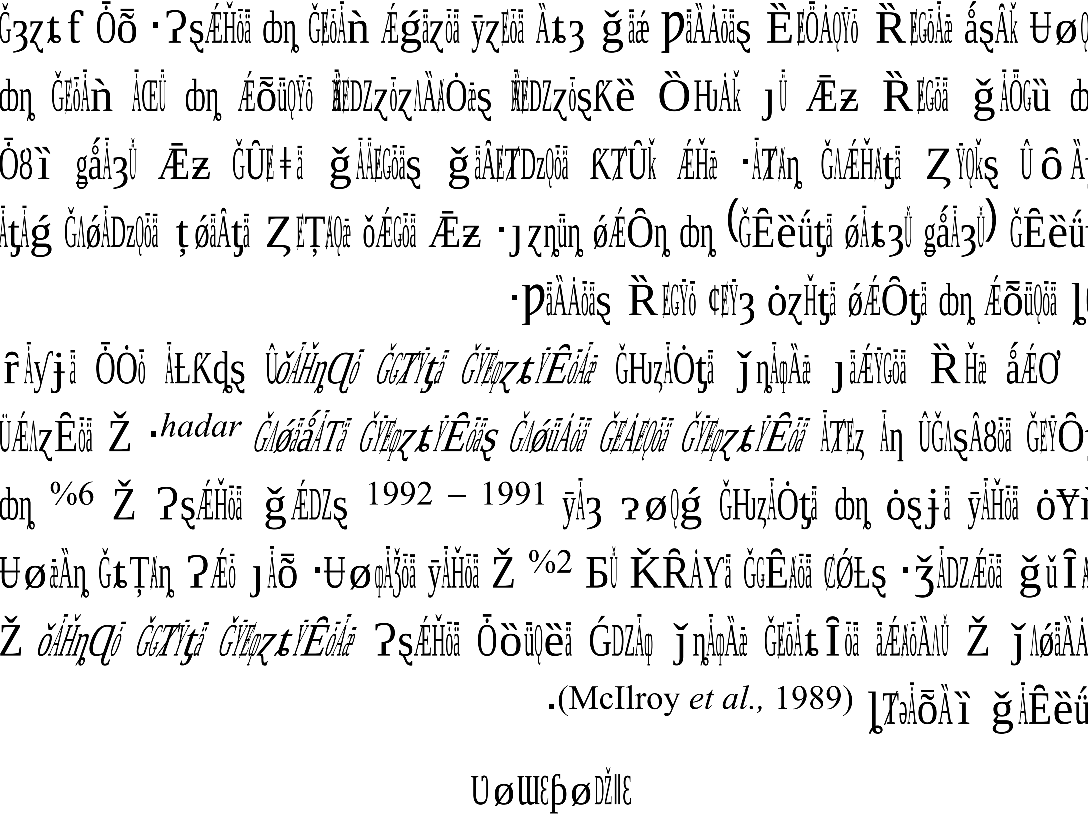
dublin

50

(Kramer *et al.*, 1992)

(1988

60)



Ager, E.A., F.H. Top, Sr. Salmonellosis. *In*: Top, F.H., Sr., P.F. Wehrle, eds. *Communicable and Infectious Diseases*, 7th ed. Saint Louis: Mosby; 1972.

Aserkoff, B., S.A. Schroeder, P.S. Brachman. Salmonellosis in the United States—a five-year review. *Am J Epidemiol* 92:13–24, 1970.

Barker, R., D.C. Old, J.C. Sharp. Phage type/biotype groups of *Salmonella typhimurium* in Scotland 1974–6: Variation during spread of epidemic clones. *J Hyg* 84:115–125, 1980.

Bauerfeind, R., L.H. Wieler, R. Weiss, G. Baljer. [Comparative plasmid profile analysis of *Salmonella typhimurium* var. *Copenhagen* strains from a *Salmonella* outbreak in hospitalized horses.] *Berl Münch Tierärztl Wochenschr* 105:38–42, 1992.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Binsztein, N., T. Eiguer, M. D'Empaire. [An epidemic of salmonellosis in Buenos Aires and its suburbs.] *Medicina* 42:161–167, 1982.

Bryan, F.L. Current trends in food-borne salmonellosis in the United States and Canada. *J Food Protect* 44:394–402, 1981.

Butterfield, J., J.C. Coulson, S.V. Kearsey, P. Monaghan, J.H. McCoy, G.E. Spain. The herring gull *Larus argentatus* as a carrier of *Salmonella*. *J Hyg* 91:429–436, 1983.

Buxton, A., H.I. Field. Salmonellosis. *In*: Stableforth, A.W., I.A. Galloway, eds. *Infectious Diseases of Animals*. London: Butterworth; 1959.

Cambre, R.C., D.E. Green, E.E. Smith, R.J. Montali, M. Bush. Salmonellosis and arizonosis in the reptile collection at the National Zoological Park. *J Am Vet Med Assoc* 177:800–803, 1980.

Clarenburg, A. Salmonellosis. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Coulson, J.C., J. Butterfield, C. Thomas. The herring gull *Larus argentatus* as a likely transmitting agent of *Salmonella montevideo* to sheep and cattle. *J Hyg* 91:437–443, 1983.

D'Aoust, J.Y. *Salmonella*. *In*: M.P. Doyle, ed. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

D'Aoust, J.Y., E. Daley, M. Crozier, A.M. Sewell. Pet turtles: A continuing international threat to public health. *Am J Epidemiol* 132:233–238, 1990.

Edwards, P.R., W.H. Ewing. *Identification of* Enterobacteriaceae. 3rd ed. Minneapolis: Burgess; 1972.

Edwards, P.R., M.M. Galton. Salmonellosis. *Adv Vet Sci* 11:1–63, 1967.

Eiguer, T., M.I. Caffar, G.B. Fronchkowsky. [Significance of Salmonella enteritidis in outbreaks of diseases transmitted by foods in Argentina, 1986–1988]. *Rev Argent Microbiol* 22:31–36, 1990.

Farmer, J.J., III, A.C. McWhorter, D.J. Brenner, *et al.* The *Salmonella-Arizona* group of *Enterobacteriaceae*: Nomenclature, classification and reporting. *Clin Microbiol Newsletter* 6:63–66, 1984.

el-Gazzar, F.E., E.H. Marth. Salmonellae, salmonellosis, and dairy foods: A review. *J Dairy Sci* 75:2327–2343, 1992.

Gunn, R.A., Bullón, F. Salmonella enterocolitis: Report of a large foodborne outbreak in Trujillo, Peru. *Bull Pan Am Health Organ* 13(2):162–168, 1979.

Hargrett-Bean, N.T., A.T. Pavia, R.V. Tauxe. *Salmonella* isolates from humans in the United States, 1984–1986. *MMWR Morb Mortal Wkly Rep* 37 (Suppl 2):25–31, 1988.

Humphrey, T.J., G.C. Mead, B. Rowe. Poultry meat as a source of human salmonellosis in England and Wales. Epidemiological Overview. *Epidemiol Infect* 100:175–184, 1988.

Kourany, M., L. Bowdre, A. Herrer. Panamanian forest mammals as carriers of *Salmonella*. *Am J Trop Med Hyg* 25:449–455, 1976.

Kramer, T.T., M.B. Roof, R.R. Matheson. Safety and efficacy of an attenuated strain of *Salmonella choleraesuis* for vaccination of swine. *Am J Vet Res* 53:444–448, 1992.

Le Minor, L., M.Y. Popoff. Request for an opinion. Designation of *Salmonella enterica* sp. nov., nom. rev., as the type and only species of the genus *Salmonella*. *Int J Syst Bacteriol* 37:465–468, 1987.

McIlroy, S.G., R.M. McCracken, S.D. Neill, J.J. O'Brien. Control, prevention and eradication of *Salmonella enteritidis* infection in broiler and broiler breeder flocks. *Vet Rec* 125(22):545–548, 1989.

McLaren, I.M., C. Wray. Epidemiology of *Salmonella typhimurium* infection in calves: Persistence of salmonellae on calf units. *Vet Rec* 129:461–462, 1991.

Morse, E.V., M.A. Duncan. Salmonellosis—an environmental health problem. *J Am Vet Med Assoc* 165:1015–1019, 1974.

Murray, M.J. *Salmonella*: Virulence factors and enteric salmonellosis. *J Am Vet Med Assoc* 189:145–147, 1986.

Nagaraja, K.V., B.S. Pomeroy, J.E. Williams. Paratyphoid infections. *In*: Calnek, B.W., H.J. Barnes, C.W. Beard, W.M. Reid, H.W. Yoder, Jr., eds. *Diseases of Poultry*. 9th ed. Ames: Iowa State University Press; 1991.

Peluffo, C.A. Salmonellosis in South America. *In*: Van Oye, E., ed. *The World Problem of Salmonellosis*. The Hague: Junk; 1964.

Pietzsch, O. Salmonellose-Überwachung in der Bundesrepublik Deutschland einschl. Berlin (West). *Bundesgesundhbl* 25:325–327, 1982.

Pietzsch, O. Salmonellose-Überwachung bei Tieren, Lebens-und Futtermitteln in der Bundesrepublik Deutschland einschl. Berlin (West), 1984/85. *Bundesgesundhbl* 29:427–429, 1986.

Poehn, H.P. Salmonellose-Überwachtung beim Menschen in der Bundesrepublik Deutschland einschl. Berlin (West). *Bundesgesundhbl* 25:320–324, 1982.

Rodrigue, D.C., R.V. Tauxe, B. Rowe. International increase in *Salmonella enteritidis*: A new pandemic? *Epidemiol Infect* 105:21–27, 1990.

Silliker, J.H. The *Salmonella* problem: Current status and future direction. *J Food Protect* 45:661–666, 1982.

Skerman, V.B.D., V. McGowan, P.H.A. Sneath. Approved list of bacterial names. *Int J Syst Bacteriol* 30:225–420, 1980.

Smith, B.P., M. Reina-Guerra, S.K. Hoiseth, B.A. Stocker, F. Habasche, E. Johnson, *et al.* Aromatic-dependent *Salmonella typhimurium* as modified live vaccines for calves. *Am J Vet Res* 45:59–66, 1984.

Stevens, A., C. Joseph, J. Bruce, *et al.* A large outbreak of *Salmonella enteritidis* phage type 4 associated with eggs from overseas. *Epidemiol Infect* 103:425–433, 1989.

Tauxe, R.V., M.P. Tormey, L. Mascola, *et al.* Salmonellosis outbreak on transatlantic flights; foodborne illness on aircraft: 1947–1984. *Am J Epidemiol* 125:150–157, 1987.

Taylor, J., J.H. McCoy. *Salmonella* and *Arizona* infections. *In*: Riemann, H., ed. *Food-Borne Infections and Intoxications*. New York: Academic Press; 1969.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca, New York: Comstock; 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). *Salmonella Surveillance. Annual Summary 1980*. Atlanta: CDC; 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Update: *Salmonella enteritidis* infections and shell eggs—United States, 1990. *MMWR Morb Mortal Wkly Rep* 39:909–912, 1990.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Foodborne nosocomial outbreak of *Salmonella reading*—Connecticut. *MMWR Morb Mortal Wkly Rep* 40 (46):804–806, 1991.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Outbreak of *Salmonella enteritidis* infection associated with consumption of raw shell eggs, 1991. *MMWR Morb Mortal Wkly Rep* 41:369–372, 1992a.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Iguana-associated salmonellosis—Indiana, 1990. *MMWR Morb Mortal Wkly Rep* 41 (3):38–39, 1992b.

United States of America, National Academy of Sciences, National Research Council. An evaluation of the *Salmonella* problem. Washington, D.C.: National Academy of Sciences; 1969.

WHO Expert Committee on Microbiological Aspects of Food Hygiene. *Microbiological aspects of food hygiene. Report of a WHO expert committee with the participation of FAO*. Geneva: WHO; 1968. (Technical Report Series 399).

WHO Expert Committee on Salmonellosis Control. *Salmonellosis Control: The Role of Animal and Product Hygiene. Report of a WHO Expert Committee*. Geneva: WHO, 1988. (Technical Report Series 774).

WHO Scientific Working Group. Enteric infections due to *Campylobacter, Yersinia, Salmonella*, and *Shigella*. *Bull World Health Organ* 58:519–537, 1980.

WHO Surveillance Programme for Control of Foodborne Infections and Intoxications in Europe N° 28:4–5, 1991.

Wilkins, E.G., C. Roberts. Extraintestinal salmonellosis. *Epidemiol Infect* 100:361–368, 1988.

Williams, L.P., B.C. Hobbs. *Enterobacteriaceae* infections. *In*: Hubbert, W.T., W.P. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

SHIGELLOSIS [illegible]

[illegible] A.03.1 [illegible] ICD–10 A03.0 [illegible] A03.2 [illegible] A03.3 [illegible] A03.8

ICD-10 A03.0 shigellosis due to *Shigella dysenteriae*; A.03.1 shigellosis due to *Shigella flexneri*; A.03.2 shigellosis due to *Shigella boydii*; A03.3 shigellosis due to *Shigella sonnei*; A03.8 other shigellosis

[illegible]

.*Enterobacteriaccac* [illegible] *Shigella* [illegible]

[illegible] *S. dysenteriae* [illegible] *boydii* [illegible] (B [illegible] *flexneri* [illegible] (A [illegible] (D [illegible] *sonnei* [illegible] (C [illegible] 38 [illegible]

[illegible] .(Keusch and Bennish, 1991)

[illegible]

48 – 24 ... 1 ...

1970 – 1969 ... 1 ... 1300 ... 1972 – 1970 ... 140 ... clone ... 112000 ... (1987 ... 1972 ... 1969 ... 10000 ... 540 ... 1 ... 1991 ...

(CDC, 1991) ... 10000 ... 5-1 ... %67.7 ... 1987 ... 16566 ... (1987 ... %1.4 ... %2.1 ... %22.2 ...

(Keusch and Bennish, 1991) ... %6.6 ...

200 [illegible] (1991 [illegible]) [illegible] 650000 [illegible] (Bennett, cited in Wachsmuth [illegible] 300000 [illegible] .and Morris, 1989)

[illegible] 1987 [illegible] %50 [illegible] 12700 [illegible] 90 [illegible] .(Wharton *et al.,* 1990) [illegible]

[illegible] .(Levine and Lanata, 1983) [illegible]

[illegible] 1 [illegible] 1984 [illegible] .(L'Hote, 1980) [illegible] (*Hylobates concolor* [illegible]

[illegible] (*Macaca silenu, M. nigra* and *M. sylvanus*) [illegible] and *H. Syndaotylies*) [illegible] 1984 [illegible] (*Gorilla gorilla*) [illegible] (*Colobus guerzea*) [illegible] 1988 [illegible] .(Banish *et al*., 1993a) [illegible] (*Ateles susciceps*) [illegible] (*Cercocelus alligena*) .(Banish *et al*., 1993a) [illegible]

[illegible] 7 – 1 [illegible] .(Keusch and Bennish, 1991) [illegible]

[illegible]

.(Banish *et al.*, 1993a)

MacConkey

(XLD)

12-6

(1991

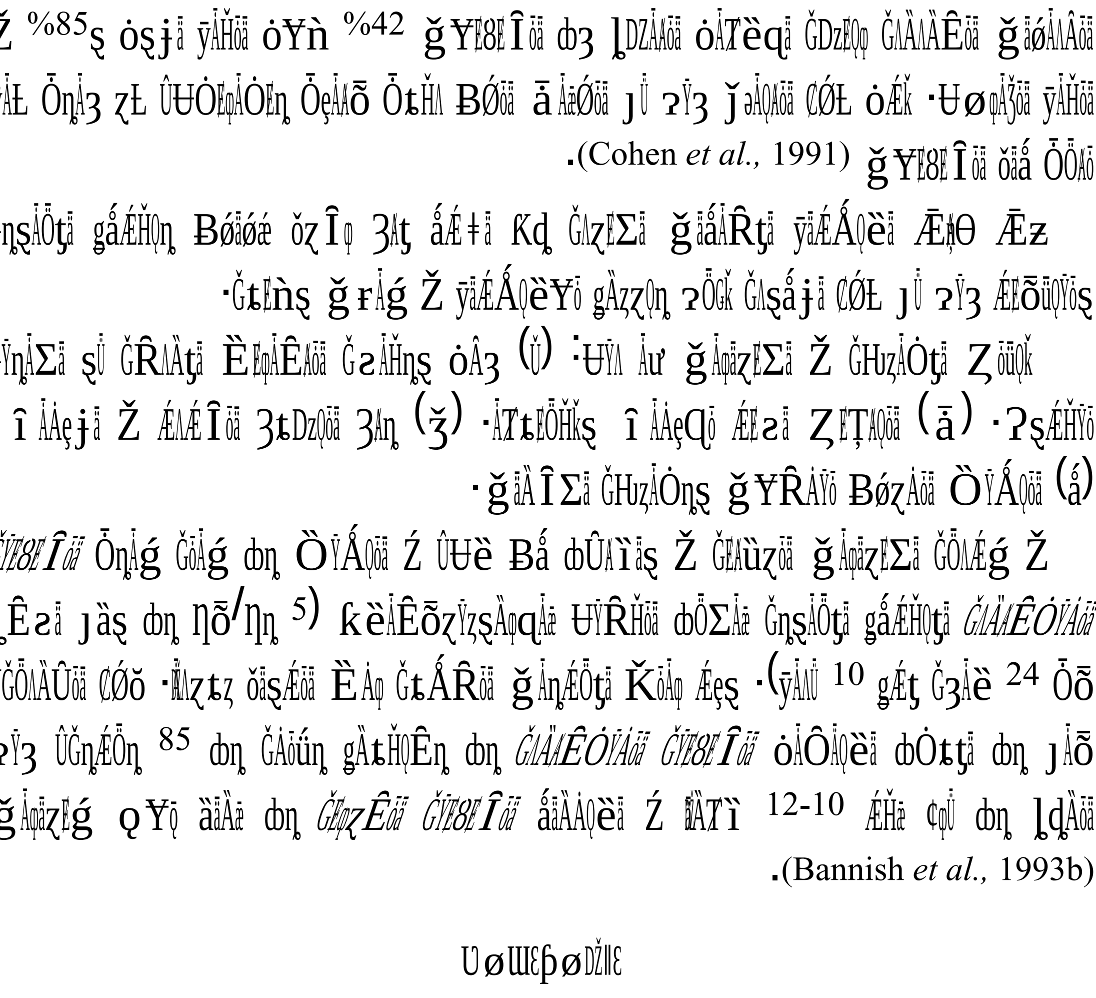
(1991

11

1988

%64

1989



Banish, L.D., R. Sims, D. Sack, *et al.* Prevalence of shigellosis and other enteric pathogens in a zoologic collection of primates. *J Am Vet Med Assoc* 203:126–132, 1993a.

Banish, L.D., R. Sims, M. Bush, *et al.* Clearance of *Shigella flexneri* carriers in a zoologic collection of primates. *J Am Vet Med Assoc* 203:133–136, 1993b.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bennett, J.V. Cited in: Wachsmuth, K., G.K. Morris. *Shigella*. *In*: Doyle, M.P. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Cohen, D., M. Green, M. Block, *et al.* Reduction of transmission of shigellosis by control of houseflies (*Musca domestica*). *Lancet* 337:993–997, 1991.

Edwards, P.R., W.H. Ewing. *Identification of* Enterobacteriaceae. 3rd ed. Minneapolis: Burgess; 1972.

Fiennes, R. *Zoonoses of Primates*. Ithaca: Cornell University Press; 1967.

Keusch, G.T., M.L. Bennish. Shigellosis. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infections of Humans*. 2nd ed. New York: Plenum Medical Book Co.; 1991.

Keusch, G.T., S.B. Formal. Shigellosis. *In*: Warren, K.S., A.A.F. Mahmoud, eds. *Tropical and Geographical Medicine*. New Jersey: McGraw-Hill; 1984.

Levine, M.M., C. Lanata. Progresos en vacunas contra diarrea bacteriana. *Adel Microbiol Enf Inf* 2:67–118, 1983.

Lewis, J.N., E.J. Gangarosa. Shigellosis. *In*: Top, F.H., Sr., P.F. Wehrle, eds. *Communicable and Infectious Diseases*. 7th ed. Saint Louis: Mosby; 1972.

L'Hote, J.L. Contribution à l'étude des salmonelloses et des shigelloses des primates. Zoonoses [thesis]. École Nationale Vétérinaire de Lyon, 1980.

Ruch, T.C. *Diseases of Laboratory Primates*. Philadelphia: Saunders; 1959.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). *Shigella dysenteriae* type 1—Guatemala, 1991. *MMWR Morb Mortal Wkly Rep* 40(25):421, 427–428, 1991.

Wachsmuth, K., G.K. Morris. *Shigella*. *In*: Doyle, M.P. *Foodborne Bacterial Pathogens*. New York: Marcel Dekker; 1989.

Wharton, M., R.A. Spiegel, J.M. Horan, *et al*. A large outbreak of antibiotic-resistant shigellosis at a mass gathering. *J Infect Dis* 162:1324–1328, 1990.

WHO Scientific Working Group. Enteric infections due to *Campylobacter*, *Yersinia*, *Salmonella*, and *Shigella*. *Bull World Health Organ* 58:519–537, 1980.

Williams, L.P., B.C. Hobbs. *Enterobacteriaceae* infections. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

World Health Organization (WHO). Development of vaccines against shigellosis: Memorandum from a WHO meeting. *Bull World Health Organ* 65:17–25, 1987.

World Health Organization (WHO). Research priorities for diarrhoeal disease vaccines: Memorandum from a WHO meeting. *Bull World Health Organ* 69(6):667–676, 1991.

[illegible]
STAPHAYLOCOCCAL FOOD POISONING

[illegible] ICD-10 A05.0
ICD-10 A05.0 foodborne staphylococcal intoxication

[illegible]

[illegible] *Staphylococcus aureus* [illegible] *hyicus* [illegible] *intermedius* [illegible] (E، D، C، B، A [illegible]) [illegible]

[illegible] [1] [illegible]

[illegible]

[illegible] 131 [illegible] 1981 [illegible] 1977 [illegible] 7126 [illegible] (Holmberg and Blake, 1984) [illegible] 827 [illegible] 1980 [illegible] 1976 [illegible] (Genigeorgis, [illegible] %28.2 [illegible] 8742 [illegible] 1989).

[illegible] (Bergdoll, 1979) [illegible]

[illegible] (*Macaca mulatto* [illegible]) [illegible]

[illegible]

[illegible] (Gillespie and [illegible] Timoney, 1981) [illegible] %48.6 [illegible] 174 [illegible] %41.4 [illegible] D [illegible] %33.3 C [illegible] %29.2 B [illegible] %5.6 A [illegible] 1056 [illegible] %33.4 [illegible] %31.1 [illegible] %10.7 D [illegible] %27 C [illegible] %54.3 A [illegible] D [illegible] C [illegible] A [illegible] D [illegible] (Kato and Kume, 1980) [illegible]

[illegible] *S. intermedius* [illegible] 115 [illegible] %13 [illegible] A [illegible] (Kaji and Kato 1980) [illegible] D C [illegible] 520 [illegible] 13 [illegible] 21 [illegible] 6 *intermedius* [illegible] D [illegible] C [illegible] (Hirooka *et al.,* 1988) 1 [illegible] 4 [illegible] E [illegible]

[illegible] (Raska *et al.*, 1980) [illegible] %100 [illegible] (Genigeorgis, 1989) [illegible] %72 [illegible]

[illegible] 3 [illegible] 30 [illegible] 8 [illegible]

[illegible] °38 [illegible] 72 – 24 [illegible]

[illegible]

[illegible] %35 [illegible] %30 [illegible]

[illegible] (Pulverer, 1983) %75 [illegible] %18 [illegible]

[illegible] 500 [illegible] (Holmberg and [illegible] 1981 [illegible] 1977 [illegible] 854 [illegible] (Blake, 1984) [illegible] 144 [illegible] A [illegible]

(Evenson *et al.,* 1988) [illegible]

[illegible] Semna [illegible] (Cross *et al.*, 1988) [illegible] B [illegible]

1984 [illegible] 1985 [illegible] (Bone *et al.,*1989) A [illegible] 59 – 46 [illegible] C [illegible] A [illegible] D [illegible] A [illegible] C [illegible] (Gutierrez, *et al.,* 1982)

[illegible]

[illegible] 80/81 [illegible] 80/81 [illegible]

[illegible]

[illegible]

[illegible]

[illegible] %47.3 [illegible] %77.2 [illegible] 715 [illegible] 215 [illegible] (Genigeorgis, 1989) [illegible]

(Waterman, *et al.*, 1987)

[13] [5] [85]

(Windemann and Baumgartner, 1985; Shinagawa *et al.*, 1990)

(ELISA)

(Benenson, 1990)

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bergdoll, M.S. The enterotoxins. *In*: Cohen, J.O., ed. *The Staphylococci*. New York: Wiley; 1972.

Bergdoll, M.S. Staphylococcal intoxications. *In*: Riemann, H., F.L. Bryan, eds. *Food-Borne Infections and Intoxications*. 2nd ed. New York: Academic Press; 1979.

Bergdoll, M.S., C.R. Borja, R.N. Robbins, K.F. Weiss. Identification of enterotoxin E. *Infect Immun* 4:593–595, 1971.

Bergdoll, M.S., B.A. Crass, R.F. Reiser, R.N. Robbins, J.P. Davis. A new staphylococca[l] enterotoxin, enterotoxin F, associated with toxic-shock-syndrome *Staphylococcus aureus* isolates. *Lancet* 1:1017–1021, 1981.

Bergdoll, M.S., R. Reiser, J. Spitz. Staphylococcal enterotoxin detection in food. *Foo[d] Techn* 30:80–83, 1976.

Bone, F.J., D. Bogie, S.C. Morgan-Jones. Staphylococcal food poisoning from sheep milk cheese. *Epidemiol Infect* 103:449–458, 1989.

Casman, E.P., R.W. Bennett. Detection of staphylococcal enterotoxin in food. *App[l] Microbiol* 13:181–189, 1965.

Cohen, J.O., P. Oeding. Serological typing of staphylococci by means of fluorescent antibodies. *J Bact* 84:735–741, 1962.

De Nooij, M.P., W.J. Van Leeuwen, S. Notermans. Enterotoxin production by strains of *Staphylococcus aureus* isolated from clinical and non-clinical specimens with special reference to enterotoxin F and toxic shock syndrome. *J Hyg* 89:499–505, 1982.

Evenson, M.L., M.W. Hinds, R.S. Bernstein, M.S. Bergdoll. Estimation of human dose of staphylococcal enterotoxin A from a large outbreak of staphylococcal food poisoning involving chocolate milk. *Int J Food Microbiol* 7:311–316, 1988.

Fluharty, D.N. Staphylococcocis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Genigeorgis, C.A. Present state of knowledge on staphylococcal intoxication. *Int J Food Microbiol* 9:327–360, 1989.

Gillespie, J.H., J.F. Timoney. *Hagan and Bruner's Infectious Diseases of Domestic Animals*. 7th ed. Ithaca: Comstock; 1981.

Gross, E.M., Z. Weizman, E. Picard, *et al.* Milkborne gastroenteritis due to *Staphylococcus aureus* enterotoxin B from a goat with mastitis. *Am J Trop Med Hyg* 39:103–104, 1988.

Gutiérrez, L.M., I. Menes, M.L. García, *et al.* Characterization and enterotoxigenicity of staphylococci isolated from mastitic ovine milk in Spain. *J Food Protect* 45:1282–1285, 1982.

Hirooka, E.Y., E.E. Müller, J.C. Freitas, *et al.* Enterotoxigenicity of *Staphylococcus intermedius* of canine origin. *Int J Food Microbiol* 7:185–191, 1988.

Holmberg, S.D., P.A. Blake. Staphylococcal food poisoning in the United States. New facts and old misconceptions. *JAMA* 251:487–489, 1984.

Kaji, Y., E. Kato. Occurrence of enterotoxigenic staphylococci in household and laboratory dogs. *Jpn J Vet Res* 28:86–94, 1980.

Kato, E., T. Kume. Enterotoxigenicity of bovine staphylococci isolated from California mastitis test-positive milk in Japan. *Jpn J Vet Res* 28:75–85, 1980.

Live, I. Staphylococci in animals: Differentiation and relationship to human staphylococcosis. *In*: Cohen, J.O., ed. *The Staphylococci*. New York: Wiley; 1972.

Merchant, I.A., R.A. Packer. *Veterinary Bacteriology and Virology*. 7th ed. Ames: Iowa State University Press; 1967.

Mossel, D.A.A., F. Quevedo. *Control microbiológico de los alimentos*. Lima: Universidad Nacional Mayor de San Marcos; 1967.

Pulverer, G. Lebensmittelvergiftugen durch Staphylokokken. *Bundesgesundhbl* 26:377–381, 1983.

Raska, K., V. Matejosvska, L. Polak. To the origin of contamination of foodstuff by enterotoxigenic staphylococci. Proceedings of the World Congress of Foodborne Infections and Intoxications. Berlin: Institute of Veterinary Medicine; 1980.

Shinagawa, K., K. Watanabe, N. Matsusaka, *et al.* Enzyme-linked immunosorbent assay for the detection of staphylococcal enterotoxins in incriminated foods and clinical specimens from outbreaks of food poisoning. *Jpn J Vet Sci* 52:847–850, 1990.

Thatcher, F.S., D.S. Clark. *Análisis microbiológico de los alimentos*. Zaragoza: Acribia; 1972.

Waterman, S.H., T.A. Demarcus, J.G. Wells, P.A. Blake. Staphylococcal food poisoning on a cruise ship. *Epidemiol Infect* 99:349–353, 1987.

Windemann, H., E. Baumgartner. Bestimmung von Staphylokokken-Enterotoxinen A, B, C und D in Lebensmitteln mittels Sandwich-ELISA mit markierten Antikörper. *Zbl Bak Hyg I Abt Orig B* 181:345–363, 1985.

STREPTOCOCCOSIS [illegible]

G00.2 [illegible] **ICD-10 A 38** [illegible] **J02.0** [illegible]

(*S. suis* and other species of interest) ICD-10 A 38 scarlet fever; G00.2 streptococcal meningitis; J02.0 streptococcal pharyngitis

.scarlatina [illegible]

[illegible] *streprococcus* [illegible] Suis [illegible]

[illegible] 20 [illegible]

.(Higgisn *et al.,* 1992) [illegible] 29 [illegible]

[illegible] .(Timoney *et al.,* 1988) [illegible] (Kunz [illegible] .and Moellering, 1981)

[illegible] 2 [illegible] D [illegible]

[illegible] 30 [illegible] 1984 [illegible] 1968 [illegible] 1985 [illegible] 1968 [illegible] 30 [illegible] .(Arends and Zanen, 1988)

[illegible] (pyogenes [illegible]) A [illegible] (agalactiae [illegible]) B [illegible] G [illegible] C [illegible] H [illegible] E [illegible] acidominimus [illegible] uberis [illegible] lactis [illegible] cremoris

zooepidemicus

(Gallis, 1990) M L G

(B agalactiae (C equi strangles suis

1988 60 suis %50 %7 28 30 4 2 (Arends and Zanen, 1988)

100000 3

pyogenes

exanthema

(Rheumatic)

A

A

B

Escherichia coli *Staphylococcus*

B

B

B

.(Patterson and el Batool Hafez, 1976)

C

16 1983

zooepidemius

C

.(CDC, 1983)

3 8 1984 1983

.(Barrett, 1986) *zooepidemicus*

11 1990 1982

11 5 %22

.(Yuen *et al.,* 1990)

C

S. equisimilis C

(Duca *et al.,* C
.1969)

D
s.bovin
enterococci
.D

(Kunz .and Moellering, 1981)
(a) "viridans"
.(Benenson, 1990)

D
.(Timoney *et al.,* 1988)

%5
663 %21 .(Clifton – Hadley, 1984)

2/1 ... 2 ... 26 ... 20 ... %12 ... 3 ... 2 ... 1 ...
2 ... (Higgins and Gottschatk, 1992) ...
... 7 ... %75 ... 7 ...
... 3 ... 8 ...
... 7 ... 7 ...
... 1 ... (Boetner *et al.*, 1987)
... 2 ... (Cook *et al.*, 1988) ...
... (Ossowicz *et al.*, 1989) ...
... 9 ... 4 ... 3 ...
9 ...
(Gogolewski *et al.*, 1990) ...

... 2 ... 5 ...
(Hommez *et al.*, 1988) ...

... 2 ...
B ... S. aglactiae (S. mastitidis ...)
...
uberis ... (C ...) (S. dysgalactcia) ...
... (E ...)
... *S.pyogenes*
...
... (C ...) *S. equi* ...
... 8 ...
...
... (C ...) *S. equisimilis* ...

S. zooepidemicus

S. zooepidemicus

(Timoney *et al.*, 1988)

(Timoney *et al.*, 1988)

15 – 5

105 603 1944 1920

(1968)

(S. agalactiae

%30 %7)

(%1

B

B agalactiae

.(Patterson and el Batool Hafeez, 1976)

[illegible] (Van den Heever and Erasmus, 1980; Berglez, 1981) [illegible]

[illegible] (C [illegible]) [illegible]

[illegible] *S. zooepidemicus* [illegible] (Rose *et al.,* 1980) [illegible] .(Yuen *et al.,* 1990) [illegible]

[illegible] 2 [illegible] *S. suis* [illegible] %50 [illegible] %3 [illegible] (Clifton – Hadley and [illegible] 45 [illegible] .Alexandre, 1980) [illegible] *S. suis* [illegible] .(Robertson *et al.,*1991) [illegible]

[illegible] M [illegible] L [illegible] G [illegible]

[illegible] *S. pyogenes* [illegible] B [illegible] C [illegible]

[illegible] B [illegible] (Jones *et al.*, 1983) [illegible] B [illegible]

[illegible] 49 [illegible] 1716 [illegible] Quebec [illegible] 23 [illegible] %5 [illegible] 539 [illegible] 2 [illegible]

[illegible] 2 [illegible] %93.1 [illegible] .%88.7 [illegible] %94.5 [illegible] .(Moreau *et al.,* 1989)

[illegible] .2 [illegible] (Tiamulin) [illegible] .(Fraser *et al.,* 1991) [illegible] (Chengappo *et al.,* 1990) .2 [illegible]

[illegible] B [illegible] B [illegible] %2.8 [illegible] 4 [illegible] %35.9 [illegible] .(Fischer *et al.,* 1983) [illegible]

S. agalactiae [illegible]

(CMT) ... *S. dysagalactiae* ... *S. zooepidemicus* ... *S. equi* ... (Timoney *et al.*, 1988)

Arends, J.P., H.C. Zanen. Meningitis caused by *Streptococcus suis* in humans. *Rev Infect Dis* 10:131–137, 1988.

Barrett, N.J. Communicable disease associated with milk and dairy products in England and Wales: 1983–1984. *J Infect* 12:265–272, 1986.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Berglez, I. Comparative studies of some biochemical properties of human and bovine *Streptococcus agalactiae* strains. *Zbl Bakt Hyg I Abst Orig* 173:457–463, 1981.

Boetner, A.G., M. Binder, V. Bille-Hansen. *Streptococcus suis* infections in Danish pigs and experimental infection with *Streptococcus suis* serotype 7. *Acta Pathol Microbiol Scand [B]* 95:233–239, 1987.

Chengappa, M.M., L.W. Pace, J.A. Williams, *et al.* Efficacy of tiamulin against experimentally induced *Streptococcus suis* type 2-infection in swine. *J Am Vet Med Assoc* 197:1467–1470, 1990.

Clifton-Hadley, F.A. Studies of *Streptococcus suis* type 2 infection in pigs. *Vet Res Commun* 8:217–227, 1984.

Clifton-Hadley, F.A., T.J. Alexander. The carrier site and carrier rate of *Streptococcus suis* type II in pigs. *Vet Rec* 107:40–41, 1980.

Cook, R.W., A.R. Jackson, A.D. Ross. *Streptococcus suis* type 1 infection of suckling pigs. *Aust Vet J* 65:64–65, 1988.

Davies, A.M. Diseases of man transmissible through animals. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Duca, E., G. Teodorovici, C. Radu, A. Vita, P. Talasman-Niculescu, E. Bernescu, *et al.* A new nephritogenic streptococcus. *J Hyg* 67:691–698, 1969.

Eickhoff, T.C. Group B streptococci in human infection. *In*: Wannamaker, L.W., J.M. Matsen, eds. *Streptococci and Streptococcal Diseases: Recognition, Understanding, and Management*. New York: Academic Press; 1972.

Fischer, G., R.E. Horton, R. Edelman. From the National Institute of Allergy and Infectious Diseases. Summary of the National Institutes of Health workshop on group B streptococcal infection. *J Infect Dis* 148:163–166, 1983.

Fluharty, D.M. Streptococcosis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Fraser, C.M., J.A. Bergeron, A. Mays, S.E. Aiello, eds. *The Merck Veterinary Manual*. 7th ed. Rahway: Merck; 1991.

Gallis, H.A. Viridans and β-hemolytic (Non-Group A, B, and D) streptococci. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd

ed. New York: Churchill Livingstone, Inc.; 1990.

Gogolewski, R.P., R.W. Cook, C.J. O'Connell. *Streptococcus suis* serotypes associated with disease in weaned pigs. *Aust Vet J* 67:202–204, 1990.

Higgins, R., M. Gottschalk. Distribution of *Streptococcus suis* capsular types in Canada in 1991. *Can Vet J* 33:406, 1992.

Hommez, J., J. Wullepit, P. Cassimon, *et al.* *Streptococcus suis* and other streptococcal species as a cause of extramammary infection in ruminants. *Vet Rec* 123:626–627, 1988.

Jones, D.E., E.M. Friedl, K.S. Kanarek, J.K. Williams, D.V. Lim. Rapid identification of pregnant women heavily colonized with group B streptococci. *J Clin Microbiol* 18:558–560, 1983.

Kunz, L.J., R.C. Moellering. Streptococcal infection. *In*: Balows, A., W.J. Hausler, Jr., eds. *Diagnostic Procedures for Bacterial, Mycotic, and Parasitic Infections*. 6th ed. Washington, D.C.: American Public Health Association; 1981.

MacKnight, J.F., P.J. Ellis, K.A. Jensen, B. Franz. Group B streptococci in neonatal deaths. *Appl Microbiol* 17:926, 1969.

Merchant, I.A., R.A. Packer. *Veterinary Bacteriology and Virology*. 7th ed. Ames: Iowa State University Press; 1967.

Moreau, A., R. Higgins, M. Bigras-Poulin, M. Nadeau. Rapid detection of *Streptococcus suis* serotype 2 in weaned pigs. *Am J Vet Res* 50:1667–1671, 1989.

Ossowicz, C.J., A.M. Pointon, P.R. Davies. *Streptococcus suis* isolated from pigs in South Australia. *Aust Vet J* 66:377–378, 1989.

Patterson, M.J., A. el Batool Hafeez. Group B streptococci in human disease. *Bacteriol Rev* 40:774–792, 1976.

Robertson, I.D., D.K. Blackmore, D.J. Hampson, Z.F. Fu. A longitudinal study of natural infection of piglets with *Streptococcus suis* types 1 and 2. *Epidemiol Infect* 107:119–126, 1991.

Rose, H.D., J.R. Allen, G. Witte. *Streptococcus zooepidemicus* (group C) pneumonia in a human. *J Clin Microbiol* 11:76–78, 1980.

Stollerman, G.H. Streptococcal disease. *In*: Beeson, P.B., W. McDermott, eds. *Cecil-Loeb Textbook of Medicine*. 12th ed. Philadelphia: Saunders; 1967.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Group C streptococcal infections associated with eating homemade cheese—New Mexico. *MMWR Morb Mortal Wkly Rep* 32(39):510, 515–516, 1983.

Van den Heever, L.W., M. Erasmus. Group B *Streptococcus*—comparison of *Streptococcus agalactiae* isolated from humans and cows in the Republic of South Africa. *J S Afr Vet Assoc* 51:93–100, 1980.

WHO Expert Committee on Streptococcal and Staphylococcal Infections. *Streptococcal and Staphylococcal Infections. Report of a WHO Expert Committee*. Geneva: WHO; 1968. (Technical Report Series 394).

Yuen, K.Y., W.H. Seto, C.H. Choi, *et al.* *Streptococcus zooepidemicus* (Lancefield group C) septicaemia in Hong Kong. *J Infect* 21:241–250, 1990.

TETANUS

A34 ICD-10 A33

A35

ICD-10 A33 tetanus neonatorum; A34 obstetrical tetanus; A35 other tetanus

.Lockjaw Trismus

clostridium tetani neurotoxin 2.5 – 2 0.5 – 0.3 Tetanospasmin 0.3 2.5 .(Orenstein and Wassilak., 1991)

.(Finn *et al.,* 1984)

1960 – 1950 8.50 100000 0.16

[illegible] 1987 [illegible] 100000 [illegible] %90 – %60 [illegible] 1973 [illegible] 1030000 [illegible] 1680000 .(Orenstein and Wassilak, 1991) [illegible] 34 [illegible] 117 [illegible] 1990 [illegible] 1989 [illegible] %58 [illegible] 100000 [illegible] 0.02 [illegible] 60 [illegible] %50 [illegible] 49 [illegible] 40 [illegible] %17 [illegible] 80 [illegible] .(CDC, 1993)

[illegible]

[illegible] .(Vera Matinez *et al.,* 1976)

[illegible] 1.2 :1977 – 1965 [illegible] 100000 [illegible] 3.1 [illegible] 1967 [illegible] 100000 [illegible] 1.7 [illegible] 1968 [illegible] 1973 [illegible] 15 [illegible] %35.8 [illegible] 4 [illegible] .(Mazzafero *et al.,* 1981) [illegible] 1990 [illegible] 1977 [illegible] 1967 [illegible] 7 [illegible] 1992 [illegible] 38 [illegible] 1991 [illegible] 49 [illegible] (Argentina Ministerio de Salud y Accion Social 1990, 1991 and 1992).

[illegible]

[illegible] (trismus [illegible]) [illegible] (rictus [illegible]) [illegible] 14 [illegible] 1990 – 1989 [illegible] 1969 [illegible] %60 [illegible] 1947 [illegible] %90 [illegible] 80 [illegible] %50 [illegible] 49-40 [illegible] %17 [illegible]

[illegible] .(Cate, 1990)

1977 – 1967 [illegible]

[illegible]	[illegible]	[illegible]	[illegible] 100000
[illegible]	168.8	4221	3.9
Catamarca	3.4	175	1.9
Corrientes	19.2	587	3.3
Chaco	38.5	572	6.7
formosa	14.2	248	5.6
Jujuy	6.7	323	2.1
Misiones	15.3	470	3.3
Salta	20.4	533	3.8
Santiago del Estero	15.7	519	3.0
Tucuman	32.6	794	4.1
[illegible]	217.6	19409	1.1
Federal District	18.5	2974	0.6
Buenos Aires	111.9	9289	1.2
Cordoba	20.9	2177	0.9
Entre Rios	16.5	838	1.9
La pampa	3.4	177	2.2
La Rioja	0.6	193	0.4
Mendoza	4.5	1025	0.4
San Juan	3.1	403	0.7
San Luis	1.5	187	0.8
Santa Fe	36.2	2200	1.6
[illegible]	3.7	762	0.5
Chubut	0.6	202	0.3
Rio Negro	1.3	281	0.4
Neuquen	1.6	170	0.9
Santa Cruz	0.2	94	0.2
Tierradel del Fuego	-	15	0.0

IU 500

.(Cate, 1990)

$14 - 2$

10 - 4

IU 300000

12

(Fraser *et al.,* .1991)

1972 ... 1946 ... 2337 ... %38.7 ... %31.7 ... %7.7 ... *Tunga penetrans* ... (Vera Martinez *et al.*, ... .1976)

(McComb, ... 1980; Benenson, 1990) (Wilson ... and Miles, 1975; Smith, 1975)

3 – 2

diphtheria DPT 3 6 (tetanus pertussi 18 %90 13 – 5 (Halsey and de Quadros, 1983) 10 455803 100000 10 (antitoxin 3 (Stanfield and Galazka, 1984) 5

antitoxin

10

Argentina, Ministerio de Salud y Acción Social. Boletines Epidemiológicos Nacionales, 1990, 1991, and 1992.

Benenson, A.S., ed. *Control of Communicable Diseases in Man.* 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bytchenko, B. Geographical distribution of tetanus in the world, 1951–60. *Bull World Health Organ* 34:71–104, 1966.

Cameron, C.M., B.J. Van Biljon, W.J. Botha, P.C. Knoetze. Comparison of oil adjuvant and aluminium phosphate-adsorbed toxoid for the passive immunization of lambs against tetanus. *Onderstepoort J Vet Res* 50:229–231, 1983.

Cate, T.R. *Clostridium tetani (Tetanus). In:* Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases.* 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Cvjetanovic, B. Epidemiología del tétanos considerada desde un punto de vista práctico de salud pública. *Bol Oficina Sanit Panam* 75:315–324, 1973.

Finn, C.W., Jr., R.P. Silver, W.H. Habig, M.C. Hardegree, *et al.* The structural gene for tetanus neurotoxin is on a plasmid. *Science* 224:881–884, 1984.

Fraser, C.M., J.A. Bergeron, A. Mays, S.E. Aiello, eds. *The Merck Veterinary Manual.* 7th ed. Rahway: Merck; 1991.

Halsey, N.A., C.A. de Quadros. *Recent Advances in Immunization*. Washington, D.C.: Pan American Health Organization; 1983. (Scientific Publication 451).

Mazzáfero, V.E., M. Boyer, A. Moncayo-Medina. The distribution of tetanus in Argentina. *Bull Pan Am Health Organ* 15(4):327–332, 1981.

McComb, J.A. Tetanus (Lockjaw). *In*: H. Stoenner, W. Kaplan, M. Torten, eds. Vol 2, Section A: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1980.

Orenstein, W.A., S.G.F. Wassilak. Tetanus. *In*: Evans, A.S., P.S. Brachman, eds. *Bacterial Infection of Humans*. 2nd ed. New York: Plenum Medical Book Co.; 1991.

Rosen, H.M. Diseases caused by clostridia. *In*: Beeson, P.B., W. McDermott, J.B. Wyngaarden, eds. *Cecil Textbook of Medicine*. 15th ed. Philadelphia: Saunders; 1979.

Rosen, M.N. Clostridial infections and intoxications. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Smith, J.W.G. Diphtheria and tetanus toxoids. *Br Med Bull* 25(2):177–182, 1969.

Smith, L.D. Clostridial diseases of animals. *Adv Vet Sci* 3:465–524, 1957.

Smith, L.D. *The Pathogenic Anaerobic Bacteria*. 2nd ed. Springfield: Thomas; 1975.

Spaeth, R. Tetanus. *In*: Top, F.H., Sr., P.F. Wehrle, eds. *Communicable and Infectious Diseases*. 7th ed. St. Louis: Mosby; 1972.

Stanfield, J.P., A. Galazka. Neonatal tetanus in the world today. *Bull World Health Organ* 62:647–669, 1984.

Tavares, W. Profilaxis do tetano. Fundamentos e critica de sua realização. *Rev Assoc Med Bras* 28:10–14, 1982.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Tetanus surveillance—United States, 1989–1990. *MMWR Morb Mortal Wkly Rep* 42:233, 1993.

Vera Martinez, A., C.M. Ramirez Boettner, V.M. Salinas, R. Zárate. Tétanos: estudio clínico y epidemiológico de 2.337 casos. *Bol Oficina Sanit Panam* 80:323–332, 1976.

Wilson, G.S., A. Miles. Vol. 2. *Topley and Wilson's Principles of Bacteriology, Virology, and Immunity*. 6th ed. Baltimore: Williams & Wilkins; 1975.

World Health Organization (WHO). Guidelines for the prevention of tetanus. *WHO Chron* 30:201–203, 1976.

TICK-BORNE RELAPSING FEVER

ICD10 A68.1

.Borreliasis

Spirillum) *Borrelia*

(*Spironema* *Spirochaeta*

Ornithodoros hermsii ... *Borrelia hermsii* ... *B. brasiliensis* ... *O. brasiliensis* ... *B. hispanica* ... *B. venzuelensi* ... *Q. erraticus* ... *O. verrucosus* ... *B. caucasica* ... *O. rudis* ...

... *B. recurrenti* ... 0.5-0.2 ... 20-3 ... *B. parkeri* ... *B. duttoni* ... (Kelly, 1984) ... *B. turicata*

... *O. mobubata* ... *O.* ... *O. rudis* ... *turicata*

... 278 ... 1969 ... 15 ... 1976 ...

46 16 62 1973 1976 .(Harwood and James, 1979) 11 6 10.000 7 14 10 4 (CDC, .1991)

7 18 4 °41 .(Barbour, 1990) 7 – 4 7 – 3

(Barbour, DNA .1990)

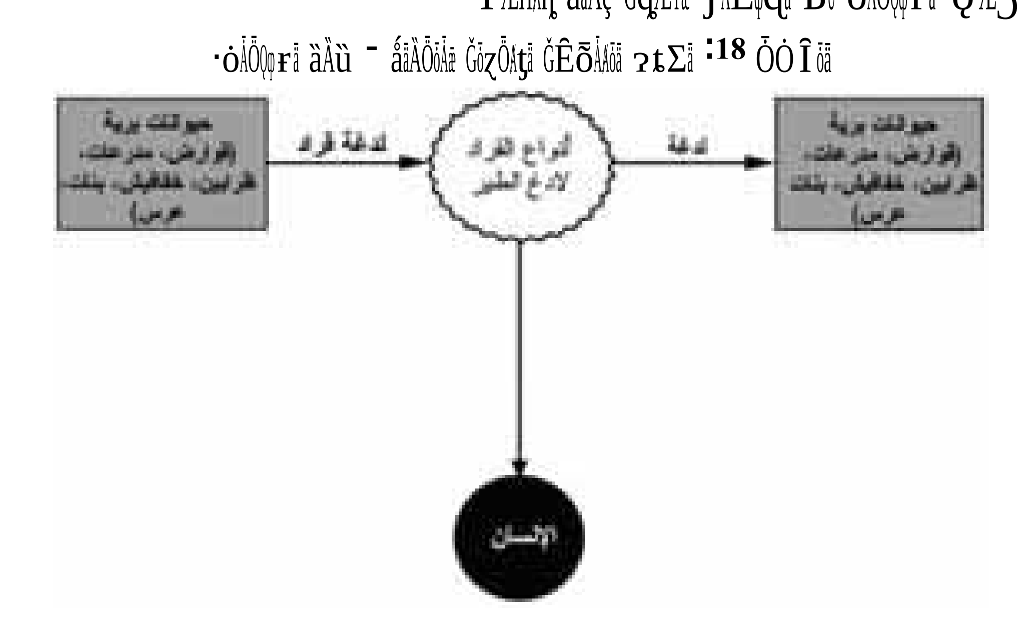
%5 %2

Argas persicus B. anserina B. theileri A. miniatus Margaropus decoloratus Rhipicephalus evertsi

(18 argasid %100 %1 O. turicata O. rudis O. hermsii

ǻǟÀÕõǟ ğǟÂƐɳ ǦĤƐĜÛõǟ Ž ǦƐõǿʐǦŸõ ÀƭǪÊƫǟ ɉǟǿşÆõǟ ȸƭȒΛ ·*O. tulaje* ɄǹɼÁǪǟ ǨÛõǟ ȟǻɼ ğǟǽ ĘùÀÀɳ Ž *O. hermsii* ɄÊɳÀŤǟ ǨÛõǟ ȟǻɼ ÌƐĤΛ ·ǦΛÆĤÀɳ ǦΛÀǽ ğÀǫǟʐƐǵ ɁŸȝ ÀŤǪΛǾ8ǩş ôǿǟʐÕõǟ ǿʐĦDZ Ž ÆDZʐǩ ɉǕ ȸÓƺş ÛÆDZÀÀÊõǟ ȳǻ ɁŸȝ ɁǾ8ǪǩÛȳ 1000 ȸȝ ÆΛÂΛ ƫÀÀǩǿǟ ğÀǫǟʐƐǵ БǕ ǦʐÀȑɋÀǽ ÛÂȝÀƫǟş ȳÀÀȡɉǟ ɄǿǨÓΛǿʐǪǟ ǨÛõǟ ȟǻɼ ÆƐÔΛ ·ǦƐǦÎʅǟ ƿǟʐõɉǟş ·ÀΛǟÀÀʅǟ ÀəÀŢǵş ğÀƐΣǟş ôǿǟʐÕõǟ ǿʐĦDZ Ž ǻʐŸɀǟ ÀÎǪƷş ɁÀǹǕ ·ɁÆĤÀɳ ǻǟÀɇ ǦȡÆŸǽ ɉÀÊǫɋǟ БǕ ȯÀÕǪɼǟ ǫÆƷ

·ȯÀÕǪɼǟ ǟÀù ¯ ǻǟÀÕõÀǽ ǦõʐÕÀƫǟ ǦÊÕÀÀõǟ ɁƭΣǟ :18 ÕÓÎõǟ



ȹȝǻʐǪÊɳ ǦΛƎõǟ ğÀǫǟʐƐΣǟ ȸɳ ǥÆΛÆȝ ƫǟʐǫǕ ÕÓÎǩ : ôÀƫǟ ğÀƐəÀǽş Ž ğÀǫǟʐƐΣǟ ǿşǻ ɄȽ ğÀȝǻʐǪÊƭõ ÀȽǿÀǪȝÀǽ ǦΛƎõǟ ğÀǫǟʐƐΣǟş ğǟǻǟÀÕŸõ ǦƐǦÊÀõǟ ǦƐƵɉǟş ·ɄǿǦǦÊõǟ ÕɳÀĤŸõ Ž ɁşÆĤõÀǟŸȝ ǦŢʐÀǂǟ Ž ǦɳÀȽ ȹǿǟşǻǕ ÆĤŸΛ ÀƵŸõ ÛÕ̀ Ÿǽ ÛȸÓõş ÛȇÀÕǫ ȝȑʐɳ Ž ÆDZʐǩ Ɓ ɄǿǪõǟ ÛÀƐÕΛÀʐǕ Ž *B. duttoni* ǦǪʐǩşÆõǟ ǦƐõǿʐǦõÀǽ ɁşÆĤõǟ ǟÆȝ Àɳ ·ǦĤƐĜÛõǟ

.*O. mobubata* ɄǿǨǟʐǟʐƫǟ ǨÛõǟ ȟǻɼ ǻǟÀÕõÀǽ ɉÀÊǫɋǟ БǕ ǥÀ̀ÀǦɳ ÕÕÀǩş ğÀǫǟʐƐΣǟ

ȯŸǹ ȒΛÀƫǟ ȳǻ Ž ôÀƭƫǟ ÕɳÀĤõǟ ǻʐDZş ƵÎõ ɁŸȝ ÒƐÁÎǪõǟ ÆƭǪĤΛ :ÒƐÁÎǪõǟ şǕ ǦDZǟÀù ğÀǹÀÛõ ȳǟÆÁǪèÀǽ ǦƭŸŢƫǟ ǦǵÀÊõÀǽ ɃÀŤǾǟ ÒĦÀõǟ ĘΛÀù ȸȝ ǦƐƭΣǟ ǦŸǵÀƫǟ ·ɉǟÀÀÀõǟ Ž ǴƐÕŸǪõÀǽ şǕ ÛWright techniques ǨΛǟǿ ğÀƐÀÕǪǽ şǕ Giemsa ǟÂƭƐ8ǽ ǦǫʐŸɳ ȳŸʐǕ

Barbour, A.G. Antigenic variation of a relapsing fever *Borrelia* species. *Ann Rev Microbiol* 44:155–171, 1990.

Bruner, D.W., J.H. Gillespie. *Hagan's Infectious Diseases of Domestic Animals*. 6th ed. Ithaca: Comstock; 1973.

Coates, J.B., B.C. Hoff, P.M. Hoff, eds. *Preventive Medicine in World War II*. Vol. VII: *Communicable Diseases: Arthropod-borne Diseases other than Malaria*. Washington, D.C.: Department of the Army; 1964.

Felsenfeld, O. *Borreliae*, human relapsing fever, and parasite-vector-host relationships. *Bact Rev* 29:46–74, 1965.

Francis, B.J., R.S. Thompson. Relapsing fever. *In*: Hoeprich, P.D., ed. *Infectious Diseases*. Hagerstown: Harper & Row; 1972.

Geigy, R. Relapsing fevers. *In*: Weinmann, D., M. Ristic, eds. Vol 2: *Infectious Blood Diseases of Man and Animals*. New York: Academic Press; 1968.

Harwood, K.F., M.T. James. *Entomology in Human and Animal Health*. 7th ed. New York: Macmillan; 1979.

Jellison, W.J. The endemic relapsing fevers. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Kelly, R.T. Genus IV *Borrelia*. *In*: Krieg, N.R., J.G. Holt, eds. Vol 1: *Bergey's Manual of Systematic Bacteriology*. Baltimore: Williams & Wilkins; 1984.

Pan American Health Organization. *Reported Cases of Notifiable Diseases in the Americas, 1969*. Washington, D.C.: PAHO; 1972. (Scientific Publication 247).

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Outbreak of relapsing fever—Grand Canyon National Park, Arizona, 1990. *MMWR Morb Mortal Wkly Rep* 40(18):296–297, 303, 1991.

TULAREMIA [illegible]

[illegible] ICD10 A21.0 [illegible] ICD-10 A21.1 [illegible] A21.7 [illegible] A21.2 [illegible] A21.8

ICD-10 A21.0 ulceroglandular tularaemia: A21.1 oculoglandular tularaemia; A21.2 Pulmonary tularaemia; A21.7 Generalized tularaemia; A21.8 other forms of tularaemia

[illegible] Francis [illegible] .Ohara

[illegible] *Francisella tularensis* [illegible] biovars [illegible] (Jellison [illegible] A [illegible]) *tularensis* [illegible] B [illegible]) *palaearctica* (Olsufjev and Meshcheryakova, 1982) *mediaasitica* [illegible] biovars [illegible] .*japonica* [illegible]

[illegible] -%70 [illegible] %90 (*Sylvilagus* [illegible]

%30–%10 (*holarctica*) *palaearctica*

.(Bell and Reilly, 1981) *palaearctica*

palaearctica

palaearctica

Lepus

F. tularensis var. *mediaasiatica*

palaearctica

japonica *mediaasiatica*

.(Sandstrom *et al.*, 1992)

274 1184

1969 1960

225 1986 – 1977

0.6 .(Rohrbach, 1988)

.(Boyce, 1990) 1.3

[illegible] (*Castor Canadensis* [illegible]) [illegible] %50 [illegible] (*Ondatra zibethicus*) [illegible] (Boyce, 1990) [illegible] 1026 [illegible] %23 [illegible] %63 [illegible] 31 [illegible] .(Taylor *et al.,* 1991) [illegible] 1975 [illegible] 1979 .(Akerman and Embil, 1982)

[illegible] 100 [illegible] 100 [illegible]

[illegible] (*Lepus timidus*) [illegible] 1500 [illegible] 1973 [illegible] 1985 [illegible] .*palaearctica* [illegible] *Lepus europeus* [illegible] *L. timidus* [illegible] 109 [illegible] .*L. timidus* [illegible] .*L. europeus* [illegible] .(Morner *et al.,* 1988)

.(Rohrbach, 1988) [illegible]
[illegible] 80/1 [illegible]
[illegible] 12 [illegible] 32 [illegible] (%6.2) [illegible]
[illegible] 90 [illegible]
[illegible] 34 [illegible] 6 [illegible] 40/1 [illegible] 56 [illegible]
.(Schmid *et al.*, 1983) [illegible]

[illegible]
344 [illegible] 13 [illegible] 2004 [illegible]
.(McKeever *et al.*, 1958) 80/1 [illegible] 10 [illegible]

[illegible]
[illegible]
[illegible] 10 – 1 [illegible] 5-3 [illegible]
[illegible]
[illegible]
[illegible]
[illegible] %85 [illegible]
[illegible]
[illegible]
[illegible] 5-3 [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

%7 ... %1 ... palae- ... %0.5 ... (arctica.

20 – 15 ... (Boyce, 1990). 14 – 7 ... palaearctica ... (Scheel *et al.*, 1993).

F. tularensis ...

14 – 8

Dermacentor andersoni

.(Rohrbach, 1988)

[illegible] *F. tularensis* [illegible]

[illegible] 160/1 [illegible] (CDC, 1982) [illegible]

[illegible] (Baldwin *et al.,* 1991) [illegible] 51 [illegible] 1928 [illegible] .(Capellan and Fong, 1993) [illegible]

[illegible] 19 [illegible]

(interepizootic)

transtadial

amplifiers

19

(*Sylvilagus* spp.

(*Castor Canadensis*

(*Lepus Californicus*) hares

[illegible] (*Microtus* spp. [illegible]) [illegible] (*Ondatra zibethicus*) [illegible] *D. andersoni* [illegible] *Dermacentor variabilis* [illegible] *palaeartica* [illegible] (*Amblyomma americanum* [illegible] *L. variabilis* [illegible] *L. variabilis* [illegible] *Lepus europaeus* [illegible] *Ixodes* spp, [illegible] (*Haemoaphysalis* spp., [illegible]

[illegible] (CDC, 1982) [illegible] (*Sanguinus* [illegible] (*nigricollis* [illegible]

(Nayar *et al.*, 1979)

(Snyder, 1980; Sato *et al.*, 1990)

(Viljanen *et al.*, 1983) socicated

IgG IgA IgM

(Syrjala *et al.*, 1986)

Brucella

Brucella

(Burke, 1977)

(Rohrbach, 1988)

(tetracyclines

streptomycin

UøɯɛþøǄɪɛ

Akerman, M.B., J.A. Embil. Antibodies to *Francisella tularensis* in the snowshoe hare (*Lepus americanus struthopus*) populations of Nova Scotia and Prince Edward Island and in the moose (*Alces alces americana* Clinton) population of Nova Scotia. *Can J Microbiol* 28:403–405, 1982.

Arata, A., H. Chamsa, A. Farhang-Azad, O. Mescerjakova, V. Neronov, S. Saidi. First detection of tularaemia in domestic and wild mammals in Iran. *Bull World Health Organ* 49:597–603, 1973.

Baldwin, C.J., R.J. Panciera, R.J. Morton, *et al.* Acute tularemia in three domestic cats. *J Am Vet Med Assoc* 199:1602–1605, 1991.

Bell, J.F, J.R. Reilly. Tularemia. *In*: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. 2nd ed. Ames: Iowa State University Press; 1981.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Boyce, J.M. *Francisella tularensis* (Tularemia). *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Burke, D.S. Immunization against tularemia: Analysis of the effectiveness of live *Francisella tularensis* vaccine in prevention of laboratory-acquired tularemia. *J Infect Dis* 135:55–60, 1977.

Capellan, J., I.W. Fong. Tularemia from a cat bite: Case report and review of feline-associated tularemia. *Clin Infect Dis* 16:472–475, 1993.

Frank, F.W., W.A. Meinershagen. Tularemia epizootic in sheep. *Vet Med* 56:374–378, 1961.

Gelman, A.C. Tularemia. *In*: May, J.M., ed. *Studies in Disease Ecology*. New York: Hafner; 1961.

Hornick, R.B. Tularemia. *In*: Hoeprich, P.D., ed. *Infectious Diseases*. Hagerstown: Harper & Row; 1972.

Marsh, H. *Newsom's Sheep Diseases*. 2nd ed. Baltimore: Williams & Wilkins; 1958.

McKeever, S., J.H. Schubert, M.D. Moody, *et al.* Natural ocurrence of tularemia in marsupials, carnivores, lagomorphs, and large rodents in southwestern Georgia and northwestern Florida. *J Infect Dis* 103:120–126, 1958.

Meyer, K.F. *Pasteurella* and *Francisella*. *In*: Dubos, R.J., J.G. Hirsch, eds. *Bacterial and Mycotic Infections of Man*. 4th ed. Philadelphia: Lippincott; 1965.

Mörner, T., G. Sandström, R. Mattsson, P.O. Nilsson. Infections with *Francisella tularensis* biovar *palaearctica* in hares (*Lepus timidus, Lepus europaeus*) from Sweden. *J Wildl Dis* 24:422–433, 1988.

Nayar, G.P., G.J. Crawshaw, J.L. Neufeld. Tularemia in a group of nonhuman primates. *J Am Vet Med Assoc* 175:962–963, 1979.

Olsen, P.F. Tularemia. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Olsufjev, N.G., I.S. Meshcheryakova. Subspecific taxonomy of *Francisella tularensis*, McCoy and Chapin, 1912. *Int J Syst Bacteriol* 33:872–874, 1983.

Pavlosky, E.N. *Natural Nidality of Transmissible Diseases*. Urbana: University of Illinois Press; 1966.

Reilly, J.R. Tularemia. *In*: Davis, J.W., L. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Rohrbach, B.W. Tularemia. *J Am Vet Med Assoc* 193:428–432, 1988.

Sandström, G., A. Sjöstedt, M. Forsman, *et al.* Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan. *J Clin Microbiol* 30:172–175, 1992.

Sato, T., H. Fujita, Y. Ohara, M. Homma. Microagglutination test for early and specific serodiagnosis of tularemia. *J Clin Microbiol* 28:2372–2374, 1990.

Scheel, O., T. Hoel, T. Sandvik, B.P. Berdal. Susceptibility pattern of Scandinavian *Francisella tularensis* isolates with regard to oral and parenteral antimicrobial agents. *APMIS* 101:33–36, 1993.

Schmid, G.P., A.N. Kornblatt, C.A. Connors, *et al.* Clinically mild tularemia associated with tick-borne *Francisella tularensis*. *J Infect Dis* 148:63–67, 1983.

Snyder, M.J. Immune response to *Francisella*. *In*: Rose, H.R., H. Friedman, eds. *Manual of Clinical Immunology*. 2nd ed. Washington, D.C.: American Society for Microbiology; 1980.

Syrjälä, H., P. Koskela, T. Ripatti, *et al.* Agglutination and ELISA methods in the diagnosis of tularemia in different clinical forms and severities of the disease. *J Infect Dis* 153:142–145, 1986.

Taylor, J.P., G.R. Istre, T.C. McChesney, *et al.* Epidemiologic characteristics of human tularemia in the southwest-central states, 1981–1987. *Am J Epidemiol* 133:1032–1038, 1991.

Thorpe, B.D., R.W. Sidwell, D.E. Johnson, K.L. Smart, D.D. Parker. Tularemia in the wildlife and livestock of the Great Salt Lake Desert Region, 1951 through 1964. *Am J Trop Med Hyg* 14:622–637, 1965.

Tiggert, W.D. Soviet viable *Pasteurella tularensis* vaccines. A review of selected articles. *Bacteriol Rev* 26:354–373, 1962.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Tularemia associated with domestic cats—Georgia, New Mexico. *MMWR Morb Mortal Wkly Rep* 31:39–41, 1982.

Viljanen, M.K., T. Nurmi, A. Salminen. Enzyme-linked immunosorbent assay (ELISA) with bacterial sonicate antigen for IgM, IgA, and IgG antibodies to *Francisella tularensis*: Comparison with bacterial agglutination test and ELISA with lipopolysaccharide antigen. *J Infect Dis* 148:715–720, 1983.

Woodward, T.E. Tularemia. *In*: Beeson, P.B., W. McDermott, eds. *Cecil Textbook of Medicine*. 15th ed. Philadelphia: Saunders; 1979.

Zidon, J. Tularemia. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

ZOONOTIC TUBERCULOSIS [illegible]

[illegible] A16 ICD-10 [illegible] A18

ICD-10 A16 respiratory tuberculosis, not confirmed bacteriologically or histologically; A18 tuberculosis of other organs

Mycobacterium [illegible] (*M. bovis* [illegible] tuberculosis [illegible] (*M. africanum* [illegible]

M. microti

M. bovis

.(Casal and Linares, 1985; Humble *et al.,* 1977) APIZIM

.DNA

DNA

.(Collins and De Lisle, 1985; Shoemaker *et al.,* 1986) *M. bovis*

.(Grange and Yates, 1989)

M. bovis [illegible]

[illegible] 5021 [illegible] 1979 [illegible] 1977 [illegible] 53 [illegible] (%1.25) [illegible] 63 [illegible] (%57.14) 36 [illegible] (%42.85) 27 [illegible] 10 [illegible] (Collins *et al.,* [illegible] (%8.2) [illegible] (%23.8) [illegible] 1981) [illegible] 1960 [illegible] 30 [illegible] %1.20 [illegible] 201 [illegible] 1987 [illegible] 1977 [illegible] (Yates and Grange, 1988) [illegible] 1935 [illegible] %40 [illegible] 52 [illegible] (Yates and Grange, 1988) [illegible] 15 – 10 [illegible] 1983 [illegible] 1979 [illegible] %88 [illegible] 61 [illegible] (Burjanova and [illegible] %71 [illegible] %17 [illegible] 47 [illegible] Nagyova, 1985) 1957 – [illegible] (Kubin *et al.,* 1985) 1983 – 1981 [illegible] %45 [illegible] 1953

%20 ... %0.1 ... 1980 ... 125 ... .(Good and Snider, 1980)

%80 ... .(Schonfeld, 1982) 1975 – 1972 ...

... 20 ...

... 1945 ...

... %30 ... %5 ...

.(Collins and Grange, 1983) ... 5 ...

... (Fernandez Slalazar ... (%4.45) 38 ... 853 ...

7195 ... .*et al.,* 1983)

... .1981 ... 1978 ...

(Argentina, Comision Nacional ... (%1.1) 82 ...

.de Zoonosis, 1982)

%0.1 1969 4.5 %0.06 33.5 1989 143 (%0.0004)

Mycobacterium africanum (Castets *et al.,* 1969) 1969 1980 Thorel *Corcopithexus* (Berggren, 1981)

.(Pritchard, 1988) [illegible]

[illegible] %50 [illegible] 127 [illegible] 1952 [illegible] 1963 [illegible] 1959 [illegible] %58 [illegible]

[illegible]

[illegible]

[illegible] .(Griffith, 1937) [illegible]

[illegible]

[illegible] %8 [illegible] 85 [illegible] 55 [illegible]

[illegible]

(ethambutol rifampicin isuniazid)

[illegible] Pearl [illegible]

[illegible] %5 [illegible] %2-%1 [illegible]

[illegible]

[illegible] *M. avium* [illegible]

.(de Kantor *et al.*, 1979)

1924

%0.67

1989

%15.2

.(Lesslie *et al.*, 1968)

%90

%80

(Theon, 1992)

(Theon, 1992)

Rodococcus

597

(reactors) (%18) 108

(Davidson *et al.*, 1981) 8 70 (%61) 43

(*Trichosurus vulpecula*)

%81.6 ... %11 ...
.(Cordes *et al.*, 1981) .%99.6

...

... 208 ... %30 ...
(typed) ... (Francis, 1958) ... 241 ... 13

...

... %75 ... 8 ...

[illegible] (Liu *et al.*, [illegible] 1980) [illegible]

[illegible] %90 [illegible] (Isaac *et al.*, 1983) [illegible]

[illegible] P (INPPAZ) [illegible] (PAN) [illegible] I.N. de [illegible] 150 [illegible] 10 [illegible] 57 [illegible] 1986 [illegible] 1974 [illegible] (Kantor [illegible] 6 [illegible] (*Trichosurus vulpecula*) [illegible] %58 [illegible] %13 [illegible] %2 [illegible]

(De Lisle *et al.*, 1990)

%70

Cercopithexus

(Thorel, 1980)

cervids

(*Trichosurus vulpecula*)

(*Cervus elaphus*)

19 26 106

(Stuart *et al.,* 1988) %80 %61.3

reactors

1986

51 47 (*Dama dama*)

(Rbinson *et al.,* 1989)

10 1991

(Essey *et al.,* 1991)

(*Trichosurus vulpecula*)

(Uper [illegible] DNA [illegible] Hut) .(Collins *et al.,* 1988)

[illegible] (*Meles meles*) badgers [illegible] .(Wilesmith, 1983)

[illegible] 250000 [illegible] 15000 [illegible] .(Cheeseman *et al.,* 1989) [illegible] %3.9 [illegible] (Wilesmithe *et al.,* 1986) [illegible] (McAleer, [illegible] .1990) [illegible] .(Grange and Collins, 1987) [illegible]

(*Lepus europapaeus*) [illegible] 4 [illegible] 1983 [illegible] 1982 [illegible]

[illegible] [369] [illegible] .(de Kantor *et al.*, 1984) [illegible] .(Veen *et al.*, 1991) [illegible] (*Syncerus* [illegible] *caffer*) [illegible] (*Tragelaphus strepsiceros*) [illegible] Kudu [illegible] (*Cephalophus grimmia*) duiker [illegible] (Pastorest *et al.*, 1988) [illegible]

[illegible] (20 [illegible]) [illegible]

[illegible]

[illegible]

[illegible]

·ȷÅÊφqäş ĞĮ`ìÅŧŸö ʔşÆĤöä óÆÔŋ ÙÛÕöä ȷzÒǨ Æç ÛĀφÅĮǵǕ ·ƟèÅèǕ ŌÒÎæ ɃzŧÅöä ĘĀÀÛöä
ȯÅŌØφŧä äÀù (ĞĮŸÊöä gÀÛÅØţä) ŌÊöä :20 ŌÒÎöä

ÅŁáäÆĤØèä ÆĢÊæ ÛÀèɉä Ž ĞĀƎöä ğÅφäzĮΣä ƙæ ȸŋ Û î Åǹ ŌÒÎæ ĞŧȚŋ ÈĮφÅÊĀöä ƎØĤǨ
·ȧÅÎĀØèŧä ĘĀÀù ȸʒ ȷÅÊφqä ȸŋ ʔşÆĤöä ÙÕØŸǨ ƟȚz ÜĞĀÄÕĞöä gÄÛÅØţäş ĞĮŸÊöä gÄÛÅØŧŸö
·ȷÅÊφqä ʔŸʒ ÅĮĤÙò ÅÀÛǹ ĞözŸÊţä ğÅŋÆÕţä ŌÒÎǨ

ğÅφäzĮǵ ƙæ ŌŋÅĤöä ȯzǹǻ ǻÀDzŋş ·ĞĀƎöä ğÅφäzĮĤŸö ʔşÆĤöä óÆÔŋ ƟŁ ĞADZäÆöä ĞĮ`ìÅţä
ʔŸʒ ÅÀÛǹ ŌÒÎĀş ÅȚĀĮæ ÀÎØĀĀ ȷǕ ʒĮÛØÊĀ ¢φüz ʔʒÀŋ Ž ĞĮ`ìÅţä ōøÅÎǨ ǨφÅõ ĞĀÀæ
ÅĮφÅÛĀÀæ Ž (*Meles meles*) ÀəäÀ8öäş ŌĀɉä Ž ǨæÅǭ äØŁş ·ȷÅÊφqä ʔŸʒş ĞADZäÆöä ğÅφäzĮΣä
·äÆĀŸĀäzĮφ Ž (*Tricjosurus vupecula*) ÿzÔæşɉäş ʔŧŢĤöä

óǻÅφ ȷÅÊφǕ ƂǕ ȷÅÊφǕ ȸŋ ƟøφäzĮΣä ŌÊöä ȯÅŌØφä ȷǕ : ô Àţä ğÅĮəÅæş Ž ğÅφäzĮΣä óşǻ
·ƟøφäzĮǵ óÆÔŋ ʔŸʒ ʔşÆĤöä ÆŧØĤǨ·ǫşÆΣä

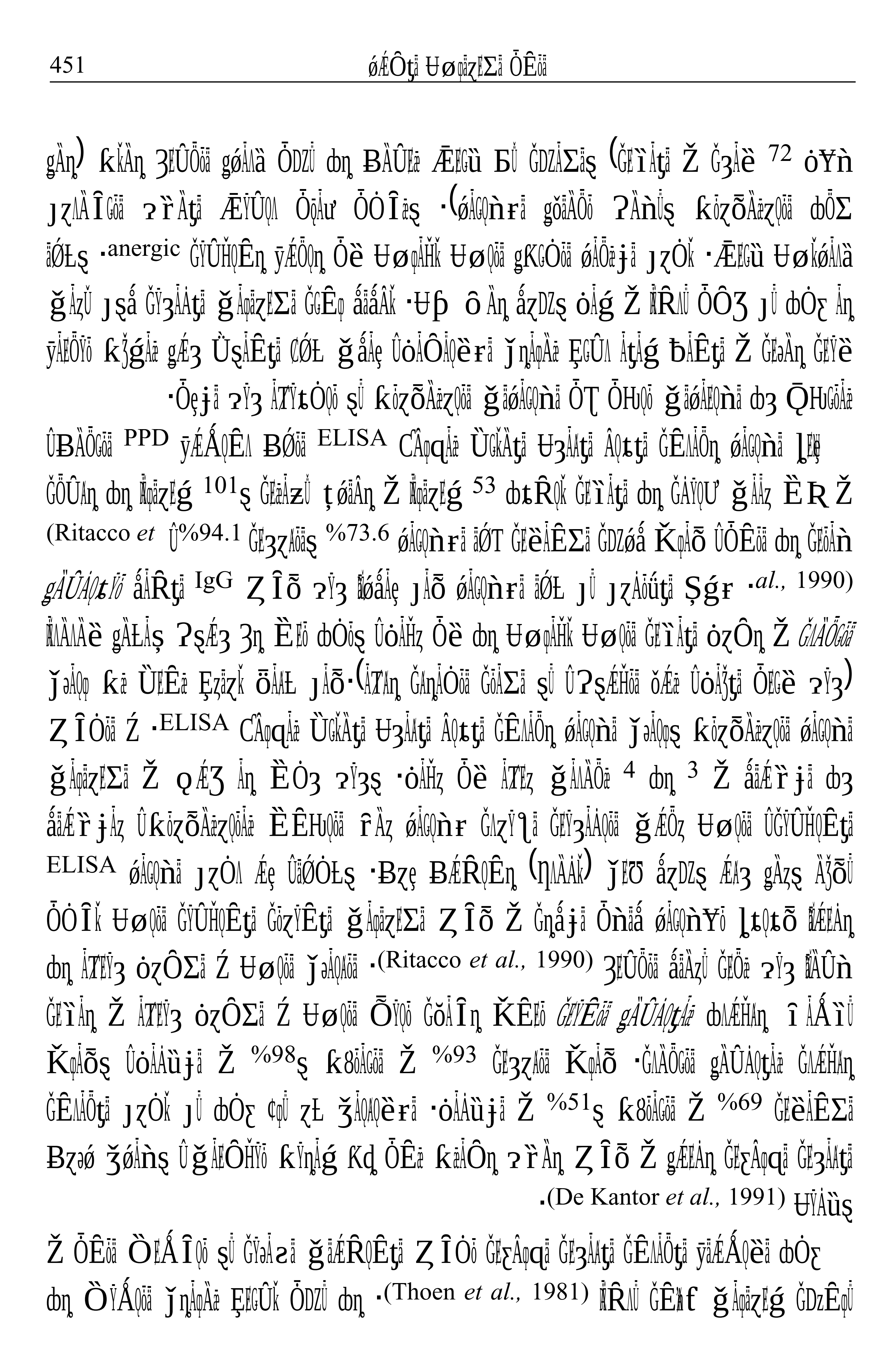
ĞĮŸÊöä gÄÛÅØţä ȸʒ ĞƤÅĀöä ĞÀÀÎĞöä ʔşÆĤöä (ĘĀÀÅǨ) ÂĮĮq ȸÒƹ ŧ ¢φǕ Åŋ :ÒĮÁÎØöä
ǻÆȚ ÒĮÁÎǨ ƂǕ ȯzòzöä ȸÒƹ ¢φüz (ÅĮʒÅĤ`ìş ÅĀÀÅè) *ĞĀÄÕĞöä gÄÛÅØţä* ȸʒ ȴDZÅĀöäş
zŧÅǨ *ĞĀÄÕĞöä gÄÛÅØţä* ȷǕ ĞŢǵŸŋ ÆƵ ÛȯÅÕöä äØŁ Ž ·ÙÕz ƟøĢĢÊöä ŌŋÅĤöä ÙĮŧÅǨş ǻäÀÅØèÅæ

[illegible] Lowentein-Jensen culture

[illegible] (PPD) [illegible] PPD [illegible] 0.1 [illegible] IU 10000 [illegible] 2000 [illegible] (Herd's [illegible] history)

[illegible] IU 2000 [illegible]

[illegible] BCG [illegible]



PPD (Rothel *et al.,* 1990) (24)

PPD %93.6 %76.8 %98 %96 .(Interpretation

.(Wood *et al.,* 1991, Wood *et al.,* 1992) %95.2

IgG 19 9 .ELISA

.(Ritacco *et al.,* 1991)

BCG

[illegible]

[illegible] BCG [illegible]

[illegible] (1991) [illegible] (1994).

[illegible]

Argentina, Comisión Nacional de Zoonosis, Subcomisión de Tuberculosis Bovina. *La tuberculosis bovina en la República Argentina*. Buenos Aires: Centro Panamericano de Zoonosis; 1982.

Berggren, S.A.. Field experiment with BCG vaccine in Malawi. *Br Vet J* 137:88–96, 1981. Cited in: Pritchard, D.G. A century of bovine tuberculosis 1888–1988: Conquest and controversy. *J Comp Pathol* 99:357–399, 1988.

Burjanova, B., M. Nagyova. [Tuberculosis due to *Mycobacterium bovis* in the human population in Slovakia 1978–1983]. *Studia Pneumologica Phtiseologica Cechoslavaca* 45:342–346, 1985.

Casal, M., M.J. Linares. Enzymatic profile of *Mycobacterium tuberculosis*. *Eur J Clin Microbiol* 3:155–156, 1985.

Castets, M., N. Rist, H. Boisvert. Le varieté africaine du bacille tuberculeux. *Medicine de l'Afrique Noire* 16:321, 1969.

Centrángolo, A., L.S. de Marchesini, C. Isola, I.N. de Kantor, M. Di Lonardo. El *Mycobacterium bovis* como causa de tuberculosis humana. Actas, 13r. Congreso Argentino de Tisiología, Mar del Plata, 1973.

Cheeseman, C.L., J.W. Wilesmith, F.A. Stuart. Tuberculosis: The disease and its epidemiology in the badger, a review. *Epidemiol Infect* 103:113–125, 1989.

Collins, D.M., G.W. De Lisle. DNA restriction endonuclease analysis of *Mycobacterium bovis* and other members of the tuberculosis complex. *J Clin Microbiol* 21:562–564, 1985.

Collins, D.M., D.M. Gabric, G.W. De Lisle. Typing of *Mycobacterium bovis* isolates from cattle and other animals in the same locality. *N Z Vet J* 36:45–46, 1988.

Collins, C.H., J.M. Grange. The bovine tubercle bacillus. *J Appl Bacteriol* 55:13–29, 1983.

Collins, C.H., M.D. Yates, J.M. Grange. A study of bovine strains of *Mycobacterium tuberculosis* isolated from humans in South-East England, 1977–1979. *Tubercle* 62:113–116, 1981.

Cordes, D.O., J.A. Bullians, D.E. Lake, M.E. Carter. Observations on tuberculosis caused by *Mycobacterium bovis* in sheep. *N Z Vet J* 29:60–62, 1981.

Davidson, R.M., M.R. Alley, N.S. Beatson. Tuberculosis in a flock of sheep. *N Z Vet J* 29:1–2, 1981.

de Kantor, I.N., E. Alvarez, eds. *Current status of bovine tuberculosis in Latin America and the Caribbean*. Buenos Aires: Pan American Zoonoses Center; 1991. (Special Publication 10).

de Kantor, I.N., L. Barrera, V. Ritacco, I. Miceli. Utilidad del enzimoinmunoensayo en el diagnóstico de la tuberculosis. *Bol Oficina Sanit Panam* 110:461–470, 1991.

de Kantor, I.N., E. de la Vega, A. Bernardelli. Infección por *Mycobacterium bovis* en liebres en la provincia de Buenos Aires, Argentina. *Rev Med Vet* 65:268–279, 1984.

de Kantor, I.N., N. Marchevsky, I.W. Lesslie. Respuesta al PPD en pacientes tuberculosos afectados por *M. tuberculosis* y por *M. bovis*. *Medicina* 36:127–130, 1976.

de Kantor, I.N., J. Pereira, J. Miquet, R. Rovère. Pouvoir pathogène expérimental de *Mycobacterium africanum* pour les bovins. *Bull Acad Vet Fr* 52:499–503, 1979.

de Kantor, I.N., V. Ritacco. Bovine tuberculosis in Latin America and the Caribbean: Current status, control and eradication programs. *Vet Microbiol* 40:5–14, 1994.

De Lisle, G.W., D.M. Collins, A.S. Loveday, *et al.* A report of tuberculosis in cats in New Zealand and the examination of strains of *Mycobacterium bovis* by DNA restriction endonuclease analysis. *N Z Vet J* 38:10–13, 1990.

Essey, M.A., A. Fanning, D.A. Saavi, J. Payeur. Bovine tuberculosis in *Cervidae*; human health concerns. *Proc Annu Meet U S Anim Health Assoc* 95:427–436, 1991.

Feldman, W.H. Tuberculosis. *In*: Hull, T.G., ed. *Diseases Transmitted from Animals to Man*. 5th ed. Springfield: Thomas; 1963.

Fernández Salazar, M., V. Gómez Pando, L. Domínguez Paredes. *Mycobacterium bovis* en la patología humana en el Perú. *Bol Inf Col Med Vet* 14:16–18, 1983.

Francis, J. *Tuberculosis in Animals and Man. A Study in Comparative Pathology*. London: Cassel; 1958.

Francis, J., C.L. Choi, A.J. Frost. The diagnosis of tuberculosis in cattle with special reference to bovine PPD tuberculin. *Aust Vet J* 49:246–251, 1973.

García Carrillo, C., B. Szyfres. La tuberculosis animal en las Américas y su transmisión al hombre. Roma: Organización de las Naciones Unidas para la Agricultura y la Alimentación; 1963.

Good, R.C., D.E. Snider, Jr. Isolation of nontuberculous mycobacteria in the United States, 1980. *J Infect Dis* 146:829–833, 1982.

Grange, J.M., C.H. Collins. Bovine tubercle bacilli and disease in animals and man. *Epidemiol Infect* 99:221–234, 1987.

Grange, J.M., M.D. Yates. Incidence and nature of human tuberculosis due to *Mycobacterium africanum* in South-East England: 1977–87. *Epidemiol Infect* 103:127–132, 1989.

Griffith, A.S. Bovine tuberculosis in man. *Tubercle* 18:528–543, 1937. Cited in: Collins, C.H., J.M. Grange. The bovine tubercle bacillus. *J Appl Bacteriol* 55:13–29, 1983.

Hawthorne, V.M., I.M. Lauder. Tuberculosis in man, dog and cat. *Am Rev Resp Dis* 85:858–869, 1962.

Horsburgh, C.R., U.G. Mason III, D.C. Farhi, M.D. Iseman. Disseminated infection with *Mycobacterium avium-intracellulare*. A report of 13 cases and review of the literature. *Medicine* 64:36–48, 1985.

Huitema, H. Development of a comparative test with equal concentrations of avian and bovine PPD tuberculin for cattle. *Tijdschr Diergeneeskd* 98:396–407, 1973.

Huitema, H. The eradication of bovine tuberculosis in cattle in the Netherlands and the significance of man as a source of infection in cattle. *Selected Papers of the Royal Netherlands Tuberculosis Association* 12:62–67, 1969. Cited in: Grange, J.M., C.H. Collins. Bovine tubercle bacilli and disease in animals and man. *Epidemiol Infect* 99:221–234, 1987.

Humble, M.W., A. King, I. Phillips. API ZYM: A simple rapid system for the detection of bacterial enzymes. *J Clin Pathol* 30:275–277, 1977.

Isaac, J., J. Whitehead, J.W. Adams, M.D. Barton, P. Coloe. An outbreak of *Mycobacterium bovis* infection in cats in an animal house. *Aust Vet J* 60:243–245, 1983.

Joint FAO/WHO Expert Committee on Zoonoses. *Joint FAO/WHO Expert Committee on Zoonoses. Third report*. Geneva: WHO; 1967. (Technical Report Series 378).

Karlson, A.G. Tuberculosis. *In:* Dunne, H.W., ed. *Diseases of Swine*. 3rd ed. Ames: Iowa State University Press; 1970.

Kleeberg, H.H. Tuberculosis and other mycobacterioses. *In:* Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Konyha, L.D., J.P. Kreier. The significance of tuberculin tests in the horse. *Am Rev Resp Dis* 103:91–99, 1971.

Kubin, M., J. Stastna, M. Havelkova. [Classification of mycobacterial causal agents of tuberculosis and mycobacteriosis in the Czech Republic in 1981–1983]. *Studia Pneumologica Phtisiologica Cechoslovaca* 45:599–603, 1985.

Lesslie, I.W., K.J. Birn, P. Stuart, *et al.* Tuberculosis in the pig and the tuberculin test. *Vet Rec* 83:647–651, 1968.

Liu, S., I. Weitzman, G.G. Johnson. Canine tuberculosis. *J Am Vet Med Assoc* 177:164–167, 1980.

Magnus, K. Epidemiological basis of tuberculosis eradication. 3. Risk of pulmonary tuberculosis after human and bovine infection. *Bull World Health Organ* 35:483–508, 1966.

Magnus, K. Epidemiological basis of tuberculosis eradication. 5. Frequency of pulmonary calcifications after human and bovine infection. *Bull World Health Organ* 36:703–718, 1967.

Matthias, D. Vergleichende Pathologie der Tuberkulose der Tiere. *In:* Meissner, G., A. Schmiedel, eds. *Mykobakterien und Mykobakterielle Krankheiten*. Teil VII. Jena: Fischer; 1970.

McAleer, P.D. The relationship between badger density and the incidence of bovine tuberculosis in County Galway. *Ir Vet J* 43:77–80, 1990.

Myers, J.A., J.H. Steele. *Bovine Tuberculosis Control in Man and Animals*. St. Louis: Green; 1969.

Pan American Health Organization (PAHO). *First International Seminar on Bovine Tuberculosis for the Americas, Santiago, Chile, 21–25 September 1970*. Washington, D.C.: PAHO; 1972. (Scientific Publication 258).

Pastoret, P.P., E.T. Thiry, B. Brochier, *et al.* Maladies de faune sauvage transmissibles aux animaux domestiques. *Rev Sci Tech Off Int Epiz* 7:661–704, 1988.

Patterson, A.B., J.T. Stamp, J.N. Ritchie. Tuberculosis. *In:* Stableforth, A.W., I.A. Galloway, eds. *Infectious Diseases of Animals*. London: Butterworths; 1959.

Pritchard, D.G. A century of bovine tuberculosis 1888–1988: Conquest and controversy. *J Comp Pathol* 99:357–399, 1988.

Ritacco, V., B. López, L. Barrera, *et al.* Further evaluation of an indirect enzyme-linked immunosorbent assay for the diagnosis of bovine tuberculosis. *Zentralbl Veterinarmed [B]* 37:19–27, 1990.

Ritacco, V., B. López, I.N. de Kantor, *et al.* Reciprocal cellular and humoral immune responses in bovine tuberculosis. *Res Vet Sci* 50:365–367, 1991.

Robinson, R.C., P.H. Phillips, G. Stevens, P.A. Storm. An outbreak of *Mycobacterium bovis* in fallow deer (*Dama dama*). *Aust Vet J* 66:195–197, 1989.

Roswurm, J.D., L.D. Konyha. The comparative-cervical tuberculin test as an aid to diagnosing bovine tuberculosis. *Proc Annu Meet U S Anim Health Assoc* 77:368–389, 1973.

Rothel, J.S., S.L. Jones, L.A. Corner, *et al.* A sandwich enzyme immunoassay for bovine interferon-gamma and its use for the detection of tuberculosis in cattle. *Aust Vet J* 67:134–137, 1990.

Ruch, T.C. *Diseases of Laboratory Primates*. Philadelphia: Saunders; 1959.

Schliesser, T. Epidemiologie der Tuberkulose der Tiere. *In*: Meissner, G., A. Schmiedel, eds. *Mykobakterien und Mykobakterielle Krankheiten*. Teil VII. Jena: Fischer; 1970.

Schmiedel, A. Erkrankungen der Menschen durch *Mycobacterium bovis*. *In*: Meissner, G., A. Schmiedel, eds. *Mykobakterien und Mykobakterielle Krankheiten*. Teil VII. Jena: Fischer, 1970.

Schonfeld, J.K. Human-to-human spread of infection by *M. bovis*. *Tubercle* 63:143–144, 1982.

Shoemaker, S.A., J.H. Fisher, W.D. Jones, C.H. Scoggin. Restriction fragment analysis of chromosomal DNA defines different strains of *Mycobacterium tuberculosis*. *Am Rev Respir Dis* 134:210–213, 1986.

Sjorgen, I., I. Sutherland. Studies of tuberculosis in man in relation to infection in cattle. *Tubercle* 56:127–133, 1974.

Stuart, F.A., P.A. Manser, F.G. McIntosh. Tuberculosis in imported red deer (*Cervus elaphus*). *Vet Rec* 122:508–511, 1988.

Thoen, C.O. Tuberculosis. *In*: Leman, A.D., B.E. Straw, W.L. Mengeling, S. D'Allaire, D.J. Taylor, eds. *Diseases of Swine*. 7th ed. Ames: Iowa State University; 1992.

Thoen, C.O., C. Malstrom, E.M. Himes, K. Mills. Use of enzyme-linked immunosorbent assay for detecting mycobacterial antigens in tissues of *Mycobacterium bovis*-infected cattle. *Am J Vet Res* 42:1814–1815, 1981.

Thorel, M.F. Isolation of *Mycobacterium africanum* from monkeys. *Tubercle* 61:101–104, 1980.

Veen, J., J.V. Kuyvenhoven, E.T.B. Dinkla, *et al.* [Tuberculosis in alpacas; a zoonosis as an imported disease]. *Nederlands Tijdschr Geneesk* 135:1127–1130, 1991.

Vestal, A.L. Procedures for the isolation of *Mycobacteria*. Atlanta: Centers for Disease Control and Prevention; 1969. (Public Health Publication 1995).

Wiessmann, J. Die Rindertuberkulose beim Menschen und ihre epidemiologische Bedeutung fur die Veterinarmedizin. *Schweiz Arch Tierheilkd* 102:467–471, 1960.

Wilesmith, J.W. Epidemiological features of bovine tuberculosis in cattle herds in Great Britain. *J Hyg* 90:159–176, 1983.

Wilesmith, J.W., P.E. Sayers, R. Bode, *et al.* Tuberculosis in East Sussex. II. Aspects of badger ecology and surveillance for tuberculosis in badger populations (1976–1984). *J Hyg* 97:11–26, 1986.

Winkler, W.G., N.B. Gale. Tuberculosis. *In*: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Wood, P.R., L.A. Corner, J.S. Rothel, *et al.* Field comparison of the interferon-gamma assay and the intradermal tuberculin tests for the diagnosis of bovine tuberculosis. *Aust Vet J* 68:286–290, 1991.

Wood, P.R., L.A. Corner, J.S. Rothel, *et al.* A field evaluation of serological and cellular diagnostic tests for bovine tuberculosis. *Vet Microbiol* 31:71–79, 1992.

Yates, M.D., J.M. Grange. Incidence and nature of human tuberculosis due to bovine tubercle bacilli in South-East England: 1977–1987. *Epidemiol Infect* 101:225–229, 1988.

الجـزء الثـانـي

الفُطـارات

ADIASPIROMYCOSIS [illegible]

ICD -10 B4 88

[illegible] adiaspirosis [illegible] Haptomycosis [illegible] .haplosporangiosis [illegible]

(*Emmonsia* [illegible]) [illegible] *Chrysosporium parvum* var. *crescens* [illegible]) [illegible] sperules [illegible] saprophytic [illegible] (adiaspores [illegible] 700 – 200 [illegible] 40 [illegible]

[illegible]

[illegible] 11 [illegible] (Englund and Hochholzer, 1993) [illegible] 4 [illegible] 23 [illegible] (1989)

[illegible] .(Leighton and Wobeser, 1987) [illegible] 124 [illegible] (*Mephitis mephitis*

(spores) Conidia

inoculum

.(Englund and Hochholzer, 1993) Resection

.(Echeverria *et al.,* 1993) Mycotic

35

4 8

.(Peres *et al.,* 1992)

.(Moraes *et al.,* 1989)

25 7

(Al bassam *et al.,* 1986)

[illegible] (Leighton and Webeser, 1978) [illegible] (1982 [illegible]) [illegible] Predator-prey [illegible] (*Musltelid nivalis*) *Mustelid* [illegible]

[illegible]

[illegible] (Leighton and [illegible] %2 [illegible] Woboser, 1978) (Englund and Hochholzer 1993) [illegible]

[illegible]

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Albassam, M.A., R. Bhatnagar, L.E. Lillie, L. Roy. Adiaspiromycosis in striped skunks in Alberta, Canada. *J Wildl Dis* 22:13–18, 1986.

Cueva, J.A., M.D. Little. *Emmonsia crescens* infection (adiaspiromycosis) in man in Honduras. *Am J Trop Med Hyg* 20:282–287, 1971.

Echevarria, E., E.L. Cano, A. Restrepo. Disseminated adiaspiromycosis in a patient with AIDS. *J Med Vet Mycol* 31:91–97, 1993.

England, D.M., L. Hochholzer. Adiaspiromycosis: An unusual fungal infection of the lung. Report of 11 cases. *Am J Surg Pathol* 17:876–886, 1993.

Jellison, W.L. Adiaspiromycosis. *In*: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Leighton, F.A., G. Wobeser. The prevalence of adiaspiromycosis in three sympatric species of ground squirrels. *J Wildl Dis* 14:362–365, 1978.

Mason, R.W., M. Gauhwin. Adiaspiromycosis in South Australian hairy-nosed wombats (*Lasiorhinus latifrons*). *J Wildl Dis* 18:3–8, 1982.

Moraes, N.A., M.C. de Almeida, A.N. Raick. Caso fatal de adiaspiromicose pulmonar humana. *Rev Inst Med Trop Sao Paulo* 31:188–194, 1989.

Peres, L.C., F. Figueiredo, M. Peinado, F.A. Soares. Fulminant disseminated pulmonary adiaspiromycosis in humans. *Am J Trop Med Hyg* 46:146–150, 1992.

Salfelder, K. New and uncommon opportunistic fungal infections. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses.* Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

ASPERGILLOSIS [illegible]

[illegible] **B44.1** [illegible] **ICD-10 B44.0** [illegible] **B44.8** [illegible] **B44.7** [illegible]

ICD-10 B44.0 invasive pulmomary aspergillosis; B44.1 other pulmomary aspergillosis; B44.7 disseminated aspergillosis; B44.8 other forms of aspergillosis

Bronchomycosis [illegible] Pneumonomycosis [illegible]

[illegible] *Aspergillus fumigatus* [illegible] *A. nidulans* [illegible] *A. flarus* [illegible] *A. terrus* [illegible] *A. niger* [illegible] *A. Parasiticus* [illegible] B1 [illegible]

[illegible]

[illegible] (1) [illegible] 2,000 [illegible] %1.2 [illegible] .(Gonzales-Mendoza, 1970) [illegible]

[illegible]

[illegible]

33 [illegible] %91 [illegible] 1991 [illegible] 1989 [illegible] 28 [illegible]

(1) [illegible]

14 … 15 …

.(Lortholary *et al.*, 1993)

(Bennett, … .1990)

.(Bennett, 1990) …

… .(Bennett, 1990)

… %33 … Hyphae …

.(Bhatnaga *et al.*, 1993) G …

… E …

… .(Green berger, 1986)

[illegible] .(Imbeault and Cormier, 1993) [illegible]

[illegible] aspirgilloma [illegible] .(Karam and Griffin, 1986) [illegible] 32 [illegible] 5 [illegible] 14 [illegible] 32 [illegible] .(Wex *et al.*, 1993) [illegible] .(Bennett, 1990) [illegible]

[illegible] 11 [illegible]

1988/7 ... 1981/7

8 ...

(Opal *et al.*, 1986)

417 ...

22 ... (%5.2) 22 ...

7 ... 17 ...

(Iwen *et al.*, 1993)

%75 ...

Mucorales ... %15 ... %10

Cotyledons

.(Schmitt, 1981)

(Hattel *et al.,* (*Ehrlichia ristici*

.1991)

.1984 – 1980 12

12 11

.(Day *et al.,* 1986)

6

.(Dallman *et al.,* 92)

.emanciation

Sacks 3 – 1

.(Chute and Richard, 1991)

(exospores Conidia)

.(Chute and Richard, 1991)

.(Kurup, 1986)

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Ajello, L., L.K. Georg, W. Kaplan, L. Kaufman. *Laboratory Manual for Medical Mycology*. Washington, D.C.: U.S. Government Printing Office; 1963. (Public Health Service Publication 994).

Bennett, J.E. *Aspergillus* species. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. Vol 2: *Principles and Practice of Infectious Disease*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Bhatnagar, P.K., B. Banerjee, P.V. Sarma. Serological findings in patients with allergic bronchopulmonary aspergillosis during remission. *J Infect* 27:33–37, 1993.

Chute, H.L., J.L. Richard. Fungal infections. *In*: Calnek, B.W., H.J. Barnes, C.W. Beard, W.M. Reid, H.W. Yoder, Jr., eds. *Diseases of Poultry*. 9th ed. Ames: Iowa State University Press; 1991.

Dallman, M.J., T.L. Dew, L. Tobias, R. Doss. Disseminated aspergillosis in a dog with diskospondylitis and neurologic deficits. *J Am Vet Med Assoc* 200:511–513, 1992.

Day, M.J., W.J. Penhale, C.E. Eger, *et al*. Disseminated aspergillosis in dogs. *Aust Vet J* 63:55–59, 1986.

González-Mendoza, A. Opportunistic mycoses. *In*: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Gordon, M.A. Current status of serology for diagnosis and prognostic evaluation of opportunistic fungus infections. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses*. Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

Greenberger, P.A. Aspergillosis: Clinical aspects. *Zbl Bakt Hyg A* 261:487–495, 1986.

Hattel, A.L., T.R. Drake, B.J. Anderholm, E.S. McAllister. Pulmonary aspergillosis associated with acute enteritis in a horse. *J Am Vet Med Assoc* 199:589–590, 1991.

Imbeault, B., Y. Cormier. Usefulness of inhaled high-dose corticosteroids in allergic bronchopulmonary aspergillosis. *Chest* 103:1614–1617, 1993.

Iwen, P.C., E.C. Reed, J.O. Armitage, *et al*. Nosocomial invasive aspergillosis in lymphoma patients treated with bone marrow or peripheral stem cell transplants. *Infect Control Hosp Epidemiol* 14:131–139, 1993.

Karam, G.H., F.M. Griffin, Jr. Invasive pulmonary aspergillosis in nonimmunocompromised, nonneutropenic hosts. *Rev Infect Dis* 8:357–363, 1986.

Kurup, V.P. Enzyme-linked immunosorbent assay in the detection of specific antibodies against *Aspergillus* in patient sera. *Zbl Bakt Hyg A* 261:509–516, 1986.

Lortholary, O., M.C. Meyohas, B. Dupont, *et al.* Invasive aspergillosis in patients with acquired immunodeficiency syndrome: Report of 33 cases. French Cooperative Study Group on Aspergillosis in AIDS. *Am J Med* 95:177–187, 1993.

Mishra, S.K., S. Falkenberg, N. Masihi. Efficacy of enzyme-linked immunosorbent assay in serodiagnosis of aspergillosis. *J Clin Microbiol* 17:708–710, 1983.

Opal, S.M., A.A. Asp, P.B. Cannady, Jr., *et al.* Efficacy of infection control measures during a nosocomial outbreak of disseminated aspergillosis associated with hospital construction. *J Infect Dis* 153:634–637, 1986.

Schmitt, J.A. Mycotic diseases. *In*: Ristic M., I. McIntyre, eds. *Diseases of Cattle in the Tropics*. The Hague: Martinus Nijhoff; 1981.

Utz, J.P. The systemic mycoses. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Wex, P., E. Utta, W. Drozdz. Surgical treatment of pulmonary and pleuropulmonary *Aspergillus* disease. *Thorac Cardiovasc Surg* 41:64–70, 1993.

Winter, A.J. Mycotic abortion. *In*: Faulkner, L.C., ed. *Abortion Diseases of Livestock*. Springfield: Thomas; 1968.

BLASTOMYCOSIS

B40.1 **ICD-10 B40.0** **B40.7** **B40.3** **B40.8**

ICD-10 B40.0 acate pulmomary blastomycosis; B40.1 chronic pulmomary blastomycosis; B40.3 cutaneous blastomycosis; B40.7 disseminated blastomycosis; B40.8 other forms of blastomycosis

Gilchrist

Blastomyces dermatitidis Budding Mycelin enriched 25 37

Microecossytem [1]

(2 1)

precipitin exoantigen

2 12 11 (1)

.(Kaufman *et al.*, 1983)

autochthonous

.(Klein *et al.*, 1986)

157

(1975 Selby) 1968 1885

0.7 0.1

0.44 0.61 1965 1960 100,000

100,000 0.43

100,000 0.48 1967 1960

4 Hyperendemic 1982 1973

(1) ecosystem

[illegible] 100,000 [illegible]

[illegible] 100,000 [illegible] 0.23 :1985-1976 [illegible] 100,000 [illegible] 6.8 [illegible] 5 [illegible] 82 [illegible] 3 [illegible] .(Lowry *et al.,* 1989) [illegible]

[illegible] :1979 [illegible] 120 [illegible] 38 [illegible] 20 [illegible] .(Bakerspigel *el at.,* 1986)

[illegible] (1986) [illegible] 48 [illegible] beaver [illegible] 5 [illegible] 9 [illegible] 4 [illegible] 4 [illegible] .(Armsrong *et al.,* 1987) [illegible] 20 [illegible] .(Klein *et al.,* 1986)

[illegible] 20 [illegible]

205 ... 1990 ... 1980 ... 971 ... 100,000 ... 4 ... 2 ... 45 ... 23 ...

(Rudman *et al.*, 1992) ... (*Eumetopias Jubata*) ... Ferret ... (*Pamthera leo*) ... 5,477 ... 5 ...

(Breider *et al.*, 1988)

106 ... 21 ... (Klein *et al.*, 1986) ... 43 ... 6 ... 10 ... 5 ... (Myer *et al.*, 1993) ...

(Chapman, 1990)

[illegible] (Chapman, [illegible] .1990) [illegible] (Chapman, [illegible] .1990)

[illegible] 4 [illegible] 6 [illegible] 15 [illegible] 7 [illegible] 6 [illegible] (%40) [illegible] 21 [illegible] .(Pappas *et al.,* 1992) [illegible]

[illegible] 47 [illegible] %72 [illegible] .(Legndre *et al.,* 1981) [illegible] %85 200 [illegible] 1982 [illegible] 1980 [illegible] – [illegible] .(Archer *et al.,* 1987) [illegible]

[illegible] .(Holt, 1990) nephrotoxicity

[illegible] Microecosystem [illegible]

[illegible] 37° [illegible] (ambient [illegible] 37° [illegible] *Paracoccidioides* [illegible] - *brusiliensis* [illegible] .(Scalarone *et al.*, 1992) [illegible]

[illegible] [7] [illegible] [8] [illegible] [3] [illegible] histoplasmosis [illegible] (Lo and Notenboom, 1990) Coccidioidomycosis [illegible]

[illegible]

Ajello, L. Comparative ecology of respiratory mycotic disease agents. *Bact Rev* 31: 6–24, 1967.

Archer, J.R., D.O. Trainer, R.F. Schell. Epidemiologic study of canine blastomycosis in Wisconsin. *J Am Vet Med Assoc* 190:1292–1295, 1987.

Armstrong, C.W., S.R. Jenkins, L. Kaufman, *et al.* Common-source outbreak of blastomycosis in hunters and their dogs. *J Infect Dis* 155:568–570, 1987.

Bakerspigel, A., J.S. Kane, D. Schaus. Isolation of *Blastomyces dermatitidis* from an earthen floor in southwestern Ontario, Canada. *J Clin Microbiol* 24:890–891, 1986.

Benenson, A.S., ed. *Control of Communicable Diseases in Man.* 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Breider, M.A., T.L. Walker, A.M. Legendre, R.T. VanEE. Blastomycosis in cats: Five cases (1979–1986). *J Am Vet Med Assoc* 193:570–572, 1988.

Chapman, S.W. *Blastomyces dermatitidis*. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Drutz, D.J. The mycoses. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Holt, R.J. Progress in antimycotic chemotherapy, 1945–1980. *Infection* 8:5284–5287, 1980.

Kaplan, W. Epidemiology of the principal systemic mycoses of man and lower animals and the ecology of their agents. *J Am Vet Med Assoc* 163:1043–1047, 1973.

Kaufman, L. Current status of immunology for diagnosis and prognostic evaluation of blastomycosis, coccidioidomycosis, and paracoccidioidomycosis. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses*. Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

Kaufman, L., P.G. Standard, R.J. Weeks, A.A. Padhye. Detection of two *Blastomyces dermatitidis* serotypes by exoantigen analysis. *J Clin Microbiol* 18:110–114, 1983.

Klein, B.S., J.M. Vergeront, J.P. Davis. Epidemiologic aspects of blastomycosis, the enigmatic systemic mycosis. *Semin Respir Infect* 1:29–39, 1986.

Legendre, A.M., M. Walker, N. Buyukmihci, R. Stevens. Canine blastomycoses: A review of 47 clinical cases. *J Am Vet Med Assoc* 178:1163–1168, 1981.

Lo, C.Y., R.H. Notenboom. A new enzyme immunoassay specific for blastomycosis. *Am Rev Resp Dis* 141:84–88, 1990.

Lowry, P.W., K.Y. Kelso, L.M. McFarland. Blastomycosis in Washington Parish, Louisiana, 1976–1985. *Am J Epidemiol* 130:151–159, 1989.

Menges, R.W. Blastomycosis in animals. *Vet Med* 55:45–54, 1960. Cited in: Selby, L.A. Blastomycosis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Meyer, K.C., E.J. McManus, D.G. Maki. Overwhelming pulmonary blastomycosis associated with the adult respiratory distress syndrome. *N Engl J Med* 329:1231–1236, 1993.

Pappas, P.G., J.C. Pottage, W.G. Powderly, *et al*. Blastomycosis in patients with acquired immunodeficiency syndrome. *Ann Intern Med* 116:847–853, 1992.

Rudmann, D.G., B.R. Coolman, C.M. Pérez, L.T. Glickman. Evaluation of risk factors for blastomycosis in dogs: 857 cases (1980–1990). *J Am Vet Med Assoc* 201:1754–1759, 1992.

Scalarone, G.M., A.M. Legendre, K.A. Clark, K. Pusatrv. Evaluation of a commercial DNA probe assay for the identification of clinical isolates of *Blastomyces dermatitidis* from dogs. *J Med Vet Mycol* 30:43–49, 1992.

Selby, L.A. Blastomycosis. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

CANDIDIASI

B37.1 **ICD-10 B37.0** **B37.3** **B37.2** **B37.4** **B37.6** **B37.5** **B37.7**

ICD-10 B37.0 candidal stomatitis; B37.1 pulmonary candidiasis;
B37.2 candidiasis of skin and nail; B37.3 candidiasis of vulva and vagina;
B37.4 candidiasis of other urogenital sites; B37.5 candidal meningitis;
B37.6 candidal endocarditis; B37.7 candidal septicaemia

Thrush (Candidosis Moniliasis) .Candiodomycosis

Monilia ... Candida albicans ... (Oidium albicans ... C. Parapsilosis ... C. Tropicallis ... C. guillermond ... C. krusei ... .C. lusitaniae

... 5 × 3 ... chlamydospores ... Hyphae ... Habitat ... Filments ... (1983 – ... Buddiy ... (1989) ... 1980) ... 9 ...

... %5.4 ...
.(Gonzalez-Mendozo, 1970)

intertrigo

(Edwards, 1990)

(Syrjanen *et al.*, 1988)

(Edwards, 1990)

Trichomonas

[illegible]

[illegible] efficacy [illegible] [18] [illegible] 50) [illegible] 4 [illegible] 2 [illegible] Polyenes [illegible] 4 [illegible] 536 [illegible] 30 [illegible] 269 [illegible] %5.6 [illegible] 7 [illegible] 267 [illegible] %5.2 [illegible] .(Philpott-Howard *et al.*, 1993) [illegible]

[illegible] %8 [illegible]

[illegible] %20 [illegible] Crop [illegible] Cloaca [illegible]

[illegible] .(Vazques *et al.*, 1993) [illegible]

[illegible]

[illegible] %44 – %35 [illegible] 37° [illegible] 25° [illegible] Seeding [illegible] 48 – 24 [illegible] (Carter and Chengappa, [illegible] 4 – 2 [illegible] 37° [illegible] .1991) [illegible]

[illegible] antigenemia [illegible] (Lemieux *et al.,* 1990 Bougnoux *et al.,* 1990) [illegible] M [illegible] G [illegible] M [illegible] G [illegible] M [illegible]

[illegible] .(Ajello & Kaplan, 1980)

[illegible] (110 [illegible] (1:2,000) [illegible]

Ụø Шεþ ø ǱƖƐ

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Ajello, L., W. Kaplan. Systemic mycoses. *In*: Stoenner, H., W. Kaplan, M. Torten, eds. Section A, Vol 2: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1980.

Anderson, K.L. Pathogenic yeasts. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Beemer, A.M., E.S. Kuttin, Z. Katz. Epidemic venereal disease due to *Candida albicans* in geese in Israel. *Avian Dis* 17:639–649, 1973.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bougnoux, M.E., C. Hill, D. Moissenet, *et al*. Comparison of antibody, antigen, and metabolite assays for hospitalized patients with disseminated or peripheral candidiasis. *J Clin Microbiol* 28:905–909, 1990.

Carter, G.R. *Diagnostic Procedures in Veterinary Microbiology*. 2nd ed. Springfield: Thomas; 1973.

Carter, G.R., M.N. Chengappa. *Essentials of Veterinary Bacteriology and Mycology*. 4th ed. Philadelphia: Lea & Febiger; 1991.

Childress, C.M., J.A. Holder, A.N. Neely. Modifications of a *Candida albicans* biotyping system. *J Clin Microbiol* 27:1392–1394, 1989.

Edwards, J.E., Jr. *Candida* species. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

González-Mendoza, A. Opportunistic mycoses. *In*: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Gordon, M.A. Current status of serology for diagnosis and prognostic evaluation of opportunistic fungus infections. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses*. Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

Lemieux, C., G. St.-Germain, J. Vincelette, *et al*. Collaborative evaluation of antigen detection by a commercial latex agglutination test and enzyme immunoassay in the diagnosis of invasive candidiasis. *J Clin Microbiol* 28:249–253, 1990.

Negroni, P. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires: López; 1972.

Odds, F.C., A.B. Abbott. A simple system for the presumptive identification of *Candida albicans* and differentiation of strains within the species. *Sabouraudia* 18:301–317, 1980.

Odds, F.C., A.B. Abbott. Modification and extension of tests for differentiation of *Candida* species and strains. *Sabouraudia* 21:79–81, 1983.

Philpott-Howard, J.N., J.J. Wade, G.J. Mufti, *et al*. Randomized comparison of oral fluconazole versus oral polyenes for the prevention of fungal infection in patients at risk of neutropenia. Multicentre Study Group. *J Antimicrob Chemother* 31:973–984, 1993.

Soltys, M.A. *Bacteria and Fungi Pathogenic to Man and Animals*. London: Baillière-Tindall; 1963.

Syrjanen, S., S.L. Valle, J. Antonen, *et al*. Oral candidal infection as a sign of HIV infection in homosexual men. *Oral Surg Oral Med Oral Pathol* 65:36–40, 1988.

Vázquez, J.A., V. Sánchez, C. Dmuchowski, *et al*. Nosocomial acquisition of *Candida albicans*: An epidemiologic study. *J Infect Dis* 168:195–201, 1993.

COCCIDIOIDOMYCOSIS [illegible]

[illegible] B38.1 [illegible] ICD-10 B38.0 [illegible] B38.7 [illegible] B38.3 [illegible] B38.8 [illegible]

ICD-10 B38.0 acate pulmonary coccidioidomycosis; B38.1 chronic pulmonary coccidioidomycosis; B38.3 cutaneous coccidioidomycosis; B38.7 disseminated coccidioidomycosis; B38.8 other forms of coccidioidomycosis

[illegible] Posada's [illegible] *Coccidioides immitis* [illegible] arthrocondium [illegible] arthrospore [illegible] 5-2 [illegible] 80 – 10 [illegible] endospores [illegible] (Spherules (Drutz and [illegible] 6 – 4 [illegible] Huppert, 1983) [illegible] (Stevens, 1990) [illegible]

2 1.5
.(Borelli, 1970)

%100 25,000 .(Ajello, 1970 Fiese
%25 100,000
(Drutz & Huppert, .1983)
%5 Reactors
%50
450 1,208 1991
%80
%63
.(CDC, 1993)

%15 %5

200 100 (Velasco Castrejon and %13 %12

459 %6.75 .Compos Nieto, 1979)

.Coccidiodin

3,032

175 (%44) 77

.(Cervantes *et al.*, 1978) %2.5

%60 4 – 1

%40

%5

.(Ampel *et al.*, 1989)

8 – 6

[illegible] (Drutz, 1982). [illegible] (CDC, [illegible] %0.5 [illegible] 1993). [illegible] %50 [illegible] %10 [illegible] (%50 [illegible] %33) [illegible] Eosinophilic pleocyrosis [illegible] (Ragland *et al.,* 1993). [illegible] (Drutz, 1982). [illegible] (Ampel *et al.,* 1993). [illegible]

[illegible] %5 [illegible] 4 [illegible] 400 [illegible] (Ampel *et al.,* 1989). [illegible] 47 [illegible] 37 (Galgiani *et al.,* 1993).

[illegible]

[illegible] 15 [illegible] 1992 [illegible] 1984 [illegible] 1975 [illegible] %53 [illegible] %24 [illegible] 91 [illegible] 45.5 [illegible] %33 [illegible] %60 [illegible]

[illegible] 19 [illegible] 18 [illegible] 9 [illegible] 10) llamas [illegible] .(Fowler *et al.*, 1992) [illegible]

[illegible] .(Timoney *et al.*, 1988) [illegible]

[illegible]

.(Larsen *et al.,*1985, Ampel *et al.,*1989)

.(Ampel *et al.,* 1989)

endospores

aerosolization

(1)

(2)

%10

(3)

spherulin

5

48

24

significant

%43 %43

%14

(Gifford and Catanzaro, 1981)

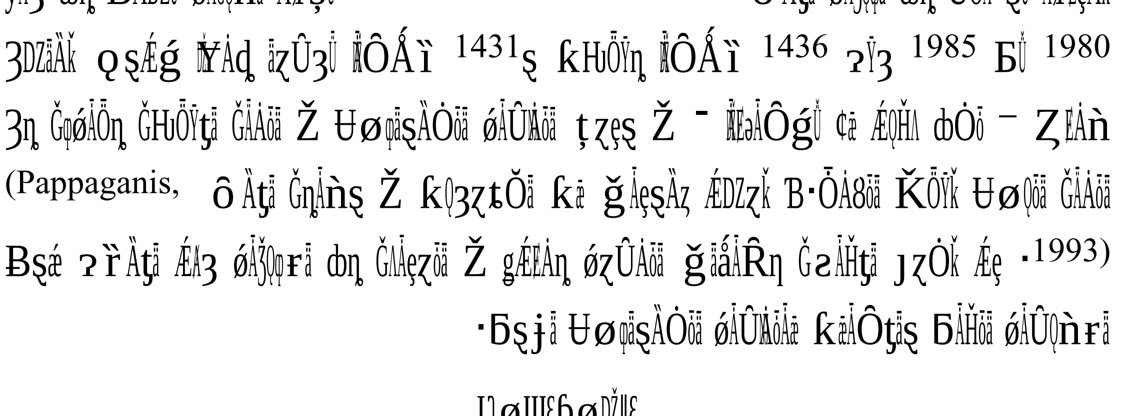
Prognosis

M

G

(Drutz, 1982) %95 %75

(Catanzaro & Flatane, 1983)



Ajello, L. Comparative ecology of respiratory mycotic disease agents. *Bact Rev* 31: 6–24, 1967.

Ajello, L. The medical mycological iceberg. *In*: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Ajello, L., L.K. Georg, W. Kaplan, L. Kaufman. *Laboratory Manual for Medical Mycology*. Washington, D.C.: U.S. Government Printing Office; 1963. (Public Health Service Publication 994).

Ampel, N.M., C.L. Dols, J.N. Galgiani. Coccidioidomycosis during human immunodeficiency virus infection: Results of prospective study in a coccidioidal endemic area. *Am J Med* 94:235–240, 1993.

Ampel, N.M., M.A. Wieden, J.N. Galgiani. Coccidioidomycosis: Clinical update. *Rev Infect Dis* 11:897–911, 1989.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Borelli, D. Prevalence of systemic mycoses in Latin America. *In*: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Catanzaro, A., F. Flataner. Detection of serum antibodies in coccidioidomycosis by solid-phase radioimmunoassay. *J Infect Dis* 147:32–39, 1983.

Cervantes, R.A., A.J. Solózano, C.B.J. Pijoan. Presencia de coccidioidomicosis en bovinos del Estado de Sonora. *Rev Latinoam Microbiol* 20:247–249, 1978.

Davis, J.W. Coccidioidomycosis. In: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Drutz, D.J. The mycoses. *In*: Wyngaarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Drutz, D.J., M. Huppert. Coccidioidomycosis: Factors affecting the host-parasite interaction. *J Infect Dis* 147:372–390, 1983.

Fiese, M.J. *Coccidioidomycosis*. Springfield: Thomas; 1958. Cited in: Ajello, L. The medical mycological iceberg. *In*: Pan American Health Organization. *Proceedings: International*

Symposium on Mycoses. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Fowler, M.E., D. Pappagianis, I. Ingram. Coccidioidomycosis in llamas in the United States: 19 cases (1981–1989). *J Am Vet Med Assoc* 201:1609–1614, 1992.

Galgiani, J.N., A. Catanzaro, G.A. Cloud, *et al.* Fluconazole therapy for coccidioidal meningitis. The NIAID-Mycoses Study Group. *Ann Intern Med* 119:28–35, 1993.

Gifford, J., A. Catanzaro. A comparison of coccidioidin and spherulin skin testing in the diagnosis of coccidioidomycosis. *Am Rev Resp Dis* 124:440–444, 1981.

Kohn, G.J., S.R. Linne, C.M. Smith, P.D. Hoeprich. Acquisition of coccidioidomycosis at necropsy by inhalation of coccidioidal endospores. *Diagn Microbiol Infect Dis* 15:527–530, 1992.

Larsen, R.A., J.A. Jacobson, A.H. Morris, B.A. Benowitz. Acute respiratory failure caused by primary pulmonary coccidioidomycosis. Two case reports and a review of the literature. *Am Rev Resp Dis* 131:797–799, 1985.

Maddy, K.T. Coccidioidomycosis. *Adv Vet Sci* 6:251–286, 1960.

Negroni, K.T. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires: López; 1972.

Pappagianis, D. Evaluation of protective efficacy of the killed *Coccidioides immitis* spherule vaccine in humans. The Valley Fever Vaccine Study Group. *Am Rev Resp Dis* 148:656–660, 1993.

Ragland, A.S., E. Arsura, Y. Ismail, R. Johnson. Eosinophilic pleocytosis in coccidioidal meningitis: Frequency and significance. *Am J Med* 95:254–257, 1993.

Stevens, D.A. *Coccidioides immitis*. *In:* Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Timoney, J.F., J.H. Gillespie, F.W. Scott, J.E. Barlough. *Hagan and Bruner's Microbiology and Infectious Diseases of Domestic Animals*. 8th ed. Ithaca: Comstock; 1988.

United States of America, Department of Health and Human Services, Centers for Disease Control and Prevention (CDC). Coccidioidomycosis—United States, 1991–1992. *MMWR Morb Mortal Wkly Rep* 42:21–24, 1993.

Velasco Castrejón, O., E. Campos Nieto. Estudio serológico de la coccidioidomicosis bovina y porcina del Estado de Sinaloa (México). *Rev Latinoam Microbiol* 21:99, 1979.

Ziemer, E.L., D. Pappagianis, J.E. Madigan, *et al.* Coccidioidomycosis in horses: 15 cases (1975–1984). *J Am Vet Med Assoc* 201:910–916, 1992.

CRYPTOCOCCOSIS [illegible]

B45.2 [illegible] **B45.1** [illegible] **B45.0 ICD-10**
[illegible] **B45.7** [illegible] **B45.3** [illegible]
[illegible] **B45.8** [illegible]

ICD-10 B45.0 pulmonary cryptococcosis; B45.1 cerebral cryptococcosis; B45.2 cutaneous cryptococcosis; B45.3 osseous cryptococcosis; B45.7 disseminated cryptococcosis; B45.8 other forms of cryptococcosis

[illegible] Torulosis [illegible]

.B ĞÒì ζä

Ğηǿζţǟ ŏäǨÒÊöä) Cryptococcus neoformans Ğηǿζţǟ ĞÆÁǺΩÊţǟ ˙ğÄÆĢĢÊöä Torula ǰÊÆÿǒ ĞöÀΣǟ ĞÆÁǺΩÊţǟ ǖTorulopsis Ğηǿζţǟ gÄDzǨΩţǟ Saccharomyces ζŁş ÛɃşÀȒÆä şǕ ɃşÀõ ŎÒì ŎηÀǨŸö ·ĞÆÆȞη āÀǩ Ž ζŧÀǩ ĞÆηÀηǿ gǨȒ (Histolytica ĞüÀèζä ĘÔΩŸǩ ʈʒäǮä ÀΦÀÒΩǩ Üğ ÀΦşÀÒη 7 –4 ȸη ȻÀÛę dzşäÀΩΛ Ûÿä À8öä ɄøäÀƶǕ ȘÀHƲư ĞÆÁǺΩÊţǟ ɉǕ gǨǹɉä ğäζÆÊöä Ž ϙÀШɉä ǨHƲȓşǕ ·(ÿɉä) ĞΛÆöäζöä ĞÆŸʅä Ž ĞÀŁÀη gÆʒÀę

.B ɄηÀʒǻ ÀÛζ ÀŒǕş ɄÊÆDZ ŎÒì ÀȚ Ğηǿζţǟ

OA ĞÆŸÔη ȓÀyǕ ĞHäǿǕ ƂǕ ĞÆəÀäş ÀȚΦ ĞȚDZş ȸη Ğηǿζţǟ ĞÆÁǺΩÊţǟ ʈÊÕǩ ȸŧȓ ÀŁǿşÆä ĞÆŸÔţä ȓÀyɉä ƵΛÔǩş ·ÆΛÀÒÊöä gÆΛÆHöä ĞÆȚÀǂä ğäÆȒΩÊţä ɁŸʒ ÆǺÀŧΩʒä ĞÆÁǺΩÊţǟş (Dş A ɉÀÆŸÔţä ɉÀÛŧÀöä) Ğηǿζţǟ āÀȓ Ğηǿζţǟ ĞÆÁǺΩÊţǟ ˙V ƙäÀȓ ĞÆəÀÆŧÆõζÆĢöä ȧşÀÀöä ƂǕ ĞζÀȓǕş ·(Cş B ɉÀÆŸÔţä ɉÀÛŧÀöä) gattii ĞÆǨǺƨǟ āÀȓ Ğηǿζţǟ (ɄÊΛƨä) P ÀŧȚÀŧõ ĞöÀǵ Ž Dş A ɉÀÆŸÔţä ɉÀÛŧÀöä ƵŸΩƩ ÛĞÆÆƨäş ĞÆDZζöşǨÊöäş ɼǕ Cş B ʒη ɉäÀΩęɼä ÀȚÀÒƩ Dş A ȸη ĞŸÆŸę Ƀǿäǿǽ ɉǕ ʈȡǿş ÜCş B ƙÆŸÔţä ƙÛŧÀöä ȸʒ

.B1990) ÙÖζ gǨÔę gÆţ ĞÆǵ ɁÖĞǩ ÀŒǕ

ŎΛäǮöäş ƙΩÀDZǿɉä Ž ƙΩÆÒΛÀηɉä Ž ôÀţä ǨĢΩǕ ˙ǿÀÎΩΦɼä ɄţÀʒ ˙ŽäÀ8ƨä ţàζΩöä Ŏõ Ž ÀÎΩÀη A ɄŸÔţä ÙŧÀöä ·ŎΛşÂøÀζş gÆHƲΩţä ğÀΛɼζöäş ÕÆÊÒţäş ÀÆĢηζöζõş äÆÀõş (äÀÊΛζèş ÀĢöÀÛΛǕş Ûõǿ Àyä Æöä) ĞÆäǿşɉä ɉäÆŸĢöä ȒHä Ž ʒəÀÎζ D ɄŸÔţä ÙŧÀöä ÀηǕ ÛɃÀHöä ɉäÀÆƩş ÛǨHȓζǩ Àǯõ Ǖ Cş B ɉÀÆŸÔţä ɉÀÛŧÀöä ˙ÈÒǨöä ɁŸʒş ·gÆHƲΩţä ğÀΛɼζöä Ž ǿǻÀΦ ȻÀÒö ĘüÀΛţä ȒHäş ÀƵŸõ şǕ ȧÀì āζÆDZş ÀΦǿζÀÆöÀõ āζÆDZ ĞòÀǹ ÛôÀţä Ŏηäζʒ ÆÊǵ

K et al., 1981 n et al., ÀÆèǕ ƂǕ ĞζÀȓϙÀä gÆHƲΩţä ğÀΛɼζöä ȸη ɁÀǹɉä ÀȚ ɄøΩöä gǻÀÀΩÊţä ɃǿäǿǾöä ȸη ĞǨÀǩÀη ĞΛζÀη ĞĢÊΦ ÆDZζǩ ÀÆöäÀΩèǕ ĘüÀΛη ȒHä Ž ·1982) Žş ·ĞÆöÀŧÎöä ɃǿζΩΛǨǩ Ž ä ĞΛüäζöä gÀȚŧƨä ĞöÀǵ Ž Àŧõ ÛĞÆǨÀƨä ĞΛǿǾöä ğäÀÆư Ęζäζǩ (ÀΛÀHƲÊöä āÀȚΩöÀä ƙäÀÔη ȸη ǨΦÀõ ÀȚΛη 24) 26 ȸη gǻÀΛΩÊη 25 ɉǕ ÆDZş Ğèäǿǻ ĞÆǨǺƨǟ āÀȓ ȸη ǨΦÀõ P55) 22 ȸη ĞΛǿǽ 21 ɉǕ ÆDZş ɁÀǹǕ Ğèäǿǻ Žş ÛĞÆǨǺƨǟ ʒη

23 [illegible] 652 [illegible] [illegible] 1987) [illegible] (73 [illegible] 30) [illegible] (31 [illegible] 10) [illegible] 1981 [illegible] 105 [illegible] 101 [illegible] 1984 [illegible] 4 [illegible] 1990 [illegible] 1992) [illegible]

[illegible] 1997 [illegible] 1965 [illegible] 1264 240 [illegible] 1997 [illegible] 1973 [illegible] 848 [illegible] 608 [illegible] 85 [illegible] 1968) [illegible] 1982) [illegible] 1980 [illegible] 1974 [illegible] 1987 [illegible] 8 –4 [illegible] 39 –20 [illegible] 1990 [illegible] 35 [illegible] 1988 [illegible] 1 [illegible] 3 [illegible] 1992

1990 [illegible] 125 [illegible] 1991 [illegible] 259 [illegible] (35 [illegible] 20) [illegible] (10 [illegible] 6) [illegible] *et al*,1992) [illegible]

[illegible] *et al.*, 1990) [illegible] 13 [illegible] 21 [illegible] 1 [illegible] 4 [illegible] (1981) [illegible] 15 [illegible] 29 [illegible] 24 [illegible] 8 [illegible] 6 [illegible] 21 [illegible] *et al.*, 1992) [illegible]

[illegible]

35 *Camaldulensis*

Camaldulensis

1990)

7 –4

1982)

1978)

et al., 1982; 1982

et al.,

1981

[illegible] *et al.,* 80) [illegible] 37 [illegible] 30 [illegible]

[illegible] 828 [illegible] 69 [illegible] 828 [illegible] 16 [illegible] *et al.,* 1990) [illegible] 17

[illegible] 184 [illegible] 20 [illegible] 20 [illegible] 19 [illegible] *et al.,* 1990) [illegible] 9 [illegible]

[illegible]

[illegible] (1990) [illegible]

[illegible]

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Bava, A.J., R. Negroni. Características epidemiológicas de 106 casos de criptococosis diagnosticados en la República Argentina entre 1981–1990. *Rev Inst Med Trop Sao Paulo* 34:335–340, 1992.

Bava, A.J., R. Negroni, A.M. Robles, *et al.* Características epidemiológicas de 71 casos de criptococosis diagnósticos en diferentes centros asistenciales de la ciudad de Buenos Aires y sus alrededores durante 1991. *Infect Microbiol Clin* 4:85–89, 1992.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Beyt, B.E., Jr., S.R. Waltman. Cryptococcal endophthalmitis after corneal transplantation. *N Engl J Med* 298:825–826, 1978.

Chapman, H.M., W.F. Robinson, J.R. Bolton, J.P. Robertson. *Cryptococcus neoformans* infection in goats. *Aust Vet J* 67:263–265, 1990.

Cohen, J. The pathogenesis of cryptococcosis. *J Infect* 5:109–116, 1982.

Diamond, R.D. *Cryptococcus neoformans*. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone, Inc.; 1990.

Drutz, D.J. The mycoses. *In*: Wyngarden, J.B., L.H. Smith, Jr., eds. *Cecil Textbook of Medicine*. 16th ed. Philadelphia: Saunders; 1982.

Ellis, D.H. *Cryptococcus neoformans* var. *gattii* in Australia. *J Clin Microbiol* 25: 430–431, 1987.

Ellis, D.H., T.J. Pfeiffer. Natural habitat of *Cryptococcus neoformans* var. *gattii*. *J Clin Microbiol* 28:1642–1644, 1990.

Fromtling, R.A., S. Shadomy, H.J. Shadomy, W.E. Dismukes. Serotypes B/C *Cryptococcus neoformans* isolated from patients in nonendemic areas. *J Clin Microbiol* 16:408–410, 1982.

Gordon, M.A. Current status of serology for diagnosis and prognostic evaluation of opportunistic fungus infections. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses*. Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

Kaplan, W., S.L. Bragg, S. Crane, D.G. Ahearn. Serotyping *Cryptococcus neoformans* by immunofluorescence. *J Clin Microbiol* 14:313–317, 1981.

Kaufman, L., S. Blumer. Cryptococcosis: The awakening giant. *In*: Pan American Health Organization. *Proceedings of the Fourth International Conference on Mycoses: The Black and White Yeasts*. Washington, D.C.: PAHO; 1978. (Scientific Publication 356).

Kwon-Chung, K.J., J.E. Bennett. Epidemiologic differences between the two varieties of *Cryptococcus neoformans*. *Am J Epidemiol* 120:123–130, 1984.

Kwon-Chung, K.J., I. Polacheck, J.E. Bennett. Improved diagnostic medium for separation of *Cryptococcus neoformans* var. *neoformans* (serotypes A and D) and *Cryptococcus neoformans* var. *gattii* (serotypes B and C). *J Clin Microbiol* 15:535–537, 1982.

Liss, H.P., D. Rimland. Asymptomatic cryptococcal meningitis. *Am Rev Resp Dis* 124:88–89, 1981.

Malik, R., D.I. Wigney, D.B. Muir, *et al.* Cryptococcosis in cats: Clinical and mycological assessment of 29 cases and evaluation of treatment using orally administered flucanozole. *J Med Vet Mycol* 30:133–144, 1992.

Medlean, L., M.A. Marks, J. Brown, W.L. Borges. Clinical evaluation of a cryptococcal antigen latex agglutination test for diagnosis of cryptococcosis in cats. *J Am Vet Med Assoc* 196:1470–1473, 1990.

Muchmore, H.G., F.G. Felton, S.B. Salvin, E.R. Rhoades. Ecology and epidemiology of cryptococcosis. *In*: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Negroni, P. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires: López; 1972.

Nelson, M.R., M. Bower, D. Smith, *et al.* The value of serum cryptococcal antigen in the diagnosis of cryptococcal infection in patients infected with the human immunodeficiency virus. *J Infect* 21:175–181, 1990.

Pathmanathan, R., T.S. Soo-Hoo. Cryptococcosis in the University Hospital Kuala Lumpur and review of published cases. *Trans Roy Soc Trop Med Hyg* 76:21–24, 1982.

Salkind, I.F., N.J. Hurd. New medium for differentiation of *Cryptococcus neoformans* serotype pairs. *J Clin Microbiol* 15:169–171, 1982.

Scott, E.N., H.G. Muchmore, F.G. Felton. Comparison of enzyme immunoassay and latex agglutination methods for detection of *Cryptococcus neoformans* antigen. *Am J Clin Pathol* 73:790–794, 1980.

Sutton, R.H. Cryptococcosis in dogs: A report on 6 cases. *Aust Vet J* 57:558–564, 1981.

Wainstein, M.V., L. Ferreira, L. Wolfenbuttel, *et al.* Achados neuropatológicos na síndrome da imunodeficiência adquirida (SIDA): revisão de 138 casos. *Rev Soc Brasil Med Trop* 25:95–99, 1992.

DERMATOPHYTOSIS

ICD-10 B35

Trichophyton *Microsporum* *Epidermophyton floccosum*

[illegible] (*Deuteromycotyna , Fungi imperfecti* [illegible]) [illegible]
T. metagrophytes [illegible] (*Nannizza otae* [illegible]
.*T. vesrucosum* [illegible] (*Arthoderma benhamine* [illegible]) [illegible] *M. equinum* [illegible] *T. simii* [illegible] *M. nanum* [illegible] *M. gallinae* [illegible] .*M. persicolor* [illegible]

[illegible]

[illegible] *Simii* [illegible]

[illegible]

[illegible] *audouinii* [illegible] 23 [illegible] 92 [illegible] 46 [illegible] (15 [illegible] 12) [illegible] 171 [illegible] 1986) [illegible] 1986 [illegible] 84 [illegible] 135 [illegible] 10,000 [illegible] 1225 [illegible] *et al.,* 1990) [illegible] *et al.,* 1993) [illegible] 1982) [illegible] 145 [illegible] 56 [illegible]

[illegible] (38) 93 [illegible] 50 [illegible] (86) [illegible] *et al.,* 1980) [illegible] 5500 [illegible] 38 [illegible] [illegible] 1983)

[illegible] 79 [illegible] (15) 12 [illegible] 17 [illegible] (10) 8 [illegible] 22 [illegible] 432 [illegible] (80) [illegible] 1368 [illegible] 1982 [illegible] 1991 [illegible] 1956 [illegible] *et al.,* 1993) [illegible] *et al.,* 1993)

[illegible] 13 [illegible] 15 [illegible] 172 [illegible] 14 [illegible]

(1991).

audouinii

microspora.

11 −4

[illegible] (et al., 1981) [illegible]

[illegible] (et al., 1981) [illegible]

[illegible] (et al., 1992) [illegible]

[illegible] et al., [illegible] 7 [illegible] 1992)

[illegible] 4–2 [illegible]

Album ochraceum Faviforme

discoides

4 –2

Lagomorphs

et al.,1991)

90

20

[illegible] 1980) [illegible] et al.,) [illegible] 1993 [illegible] et al., 1991 [illegible]

[illegible] 200000 [illegible] et al., 1982) [illegible] 6 [illegible] 1987 [illegible] 14 [illegible] et al., 1991)

[illegible]

Aamodt, O., B. Naess, O. Sandvik. Vaccination of Norwegian cattle against ringworm. *Zbl Vet Med B* 29:451–456, 1982.

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals.* 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Allen, A.M., D. Taplin. Epidemiology of cutaneous mycoses in the tropics and subtropics: Newer concepts. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses.* Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

Benenson, A.S., ed. *Control of Communicable Diseases in Man.* 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Canteros, C.E., G.O. Davel, W. Vivot, S. D'Amico. Incidencia de los distintos agentes etiológicos de micosis superficiales. *Rev Argent Microbiol* 25:129–135, 1993.

Chatterjee, A., D. Chattopadhyay, D. Bhattacharya, A.K. Dutta, D.N. Sen Gupta. Some epidemiological aspects of zoophilic dermatophytosis. *Int J Zoonoses* 7:19–33, 1980.

Chmel, L. Epidemiological aspects of zoophilic dermatophytes. *In*: Chmel, L., ed. *Recent Advances in Human and Animal Mycology.* Bratislava: Slovak Academy of Sciences; 1967.

Cuadros, J.A., J. García, J.I. Alos, R. González-Palacios. Dermatofitosis en un medio urbano: un estudio prospectivo de 135 casos. *Enferm Infecc Microbiol Clin* 8:429–433, 1990.

del Palacio, A., M. Pereiro-Miguens, C. Gimeno, *et al.* Widespread dermatophytosis due to *Microsporum (Trichophyton) gallinae* in a patient with AIDS: A case report from pain. *Clin Exp Dermatol* 17:449–453, 1992.

Emmons, C.W. Mycoses of animals. *Adv Vet Sci* 2:47–63, 1955.

English, M.P. The epidemiology of animal ringworm in man. *Br J Dermatol* 86(Suppl)8:78–87, 1972.

Gentles, J.C. Ringworm. *In*: Graham-Jones, O., ed. *Some Diseases of Animals Communicable to Man in Britain.* Oxford: Pergamon Press; 1968.

Georg, L.K. *Animal Ringworm in Public Health, Diagnosis and Nature.* Atlanta, Georgia: U.S. Centers for Disease Control and Prevention; 1960. (Public Health Service Publication 727).

Gómez Pando, V., J. Matos Díaz. Dermatofitos: aspectos epidemiológicos. *Bol Inf Col Med Vet Peru* 17:16–19, 1982.

Gudding, R., B. Naess, O. Aamodt. Immunisation against ringworm in cattle. *Vet Rec* 128:84–85, 1991.

Hay, R.J. Dermatophytosis and other superficial mycoses. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone Inc.; 1990.

Jackson, R.B., B.F. Peel, C. Donaldson-Wood. Endemic *Microsporum canis* infection in a sheep flock. *Aust Vet J* 68:122, 1991.

Lowinger-Seoane, M., J.M. Torres-Rodriguez, N. Madrenys-Brunet, *et al.* Extensive dermatophytosis caused by *Trichophyton mentagrophytes* and *Microsporum canis* in a patient with AIDS. *Mycopathologia* 120:143–146, 1992.

Moriello, K.A., D.J. De Boer. Fungal flora of the coat of pet cats. *Am J Vet Res* 52: 602–606, 1991.

Negroni, P. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires: López; 1972.

Padhye, A.A. Cutaneous mycoses. *In*: Stoenner, J., W. Kaplan, M. Torten, eds. Section A, Vol 2: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1980.

Pepin, G.C., P.K.C. Austwick. Skin diseases of domestic animals. II. Skin disease, mycological origin. *Vet Rec* 82:208–214, 1968.

Pepin, G.A., M. Oxenham. Zoonotic dermatophytosis (ringworm) [letter]. *Vet Rec* 118:110–111, 1986.

Raubitscheck, F. Fungal diseases. *In*: Van der Hoeden, J., ed. *Zoonoses*. Amsterdam: Elsevier; 1964.

Rebell, G., D. Taplin. *Dermatophytes: Their Recognition and Identification*. Miami: University of Miami Press; 1970.

Sarkisov, A.K. New methods of control of dermatomycoses common to animals and man. *In*: Lysenko, A., ed. Vol 2: *Zoonoses Control*. Moscow: Centre of International Projects; 1982.

Silva-Hunter, M., I. Weitzman, S.A. Rosenthal. Cutaneous mycoses (dermatomycoses). *In*: Balows, A., W.J. Hausler, Jr., eds. *Diagnostic Procedures for Bacterial, Mycotic and Parasitic Infections*. 6th ed. Washington, D.C.: American Public Health Association; 1981.

Smith, J.M.B. Superficial and cutaneous mycoses. *In*: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Snider, R., S. Landers, M.L. Levy. The ringworm riddle: An outbreak of *Microsporum canis* in the nursery. *Pediatr Infect Dis J* 12:145–148, 1993.

Sparkes, A.H., T.J. Gruffyd-Jones, S.E. Shaw, *et al.* Epidemiological and diagnostic features of canine and feline dermatophytosis in the United Kingdom from 1956 to 1991. *Vet Rec* 133:57–61, 1993.

Szili, M., I. Kohalmi. Endemic *Trichophyton mentagrophytes* infection of rabbit origin. *Mykosen* 24:412–420, 1981. *Abst Rev Med Vet* 64:65, 1983.

HISTOPLASMOSIS

B39.1 **B39.0 ICD-10**

B39.5 **B39.3**

ICD-10 B39.0 acute pulmonary histoplasmosis capsulati; B39.1 chronic pulmonary histoplasmosis capsulati; B39.3 disseminated histoplasmosis capsulati; B.39.5 histoplasma duboisii

[illegible]

[illegible] *Histoplasma capsulatum* [illegible]

[illegible]

.*Emmonsiela capsulate*

[illegible] 15 −7 [illegible] 5 −2 [illegible] *et al.,*90) [illegible]

[illegible] 20 [illegible] 20 [illegible] 989) [illegible]

[illegible] 30 [illegible] 975) [illegible]

[illegible] 138 [illegible] 1980 [illegible] *et al.,* 1983) [illegible] 435 [illegible] 1979–1978 [illegible] *et al.,* [illegible] 51 [illegible] 1981–1980 [illegible] 1983) [illegible] *et al.,* 1990) [illegible] 1970) [illegible] 75 [illegible] 11 [illegible] 1980 [illegible] 68 [illegible] 12 [illegible] 1979 [illegible] 2000 [illegible] 1981) [illegible] 1980) [illegible] 1967 [illegible] 1962 [illegible] 521 [illegible] 3 [illegible] 1978 [illegible] 8 [illegible] 7 [illegible] *et al.,* 1990)

[illegible] 25 [illegible] 95 [illegible]

[illegible] 200 [illegible] 1989) [illegible]

[illegible] 14000 [illegible] (et al., 1944) 62 [illegible] 4 [illegible] (et al., 1953)

[illegible] (et al., 1990) [illegible] 3 [illegible] 18 –5 [illegible] 40 [illegible]

et al., 1993) 1988 1934

et al., 1988) 4 23) 27

et al., 1992)

50 27 23

.et al., 1993)

68

1963 1952

(1982)

(*et al.*, 1990)

200) ... 27 ... 6 ... 3 ... 400 ... 24 ... 3 ... 23 ... 10

(*et al.*, 1992)

42 ... 15) ... 12 ... 4 ... 200)

(*et al.*, 1993)

7 ... 12

et al.,1989)

(*Proechimys guyanesis*)

et al., 1986)

Ajello, L. Comparative ecology of respiratory mycotic disease agents. *Bact Rev* 31:6–24, 1967.

Ajello, L., W. Kaplan. Systemic mycoses. In: Stoenner, H., W. Kaplan, M. Torten, eds. Section A, Vol 2: *CRC Handbook Series in Zoonoses*. Boca Raton: CRC Press; 1980.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Borelli, D. Prevalence of systemic mycoses in Latin America. In: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Clinkenbeard, K.D., R.L. Cowell, R.D. Tyler. Disseminated histoplasmosis in cats: 12 cases (1981–1986). *J Am Vet Med Assoc* 190:1445–1448, 1987.

Cole, C.R., R.L. Farrell, D.M. Chamberlain, *et al*. Histoplasmosis in animals. *J Am Vet Med Assoc* 122:471–473, 1953.

Conces, D.J., S.M. Stockberger, R.D. Tarver, I.J. Wheat. Disseminated histoplasmosis in AIDS: Findings on chest radiographs. *Am J Roentgenol* 160:15–19, 1993.

Coulanges, P. L'histoplasmose a grandes formes *(H. duboisii)* a Madagascar (A propos de 3 cas). *Arch Inst Pasteur Madagascar* 56:169–174, 1989.

González Menocal, I., M. Suárez Menéndez, L. Pérez González, J. Díaz Rodríguez. Estudio clínico-epidemiológico de un brote de histoplasmosis pulmonar en el Municipio de Morón. *Rev Cubana Hig Epidemiol* 28:179–183, 1990.

Hamilton, A.J., M.A. Bartholomew, L. Fenelon, *et al*. Preparation of monoclonal antibodies that differentiate between *Histoplasma capsulatum* variant *capsulatum* and *H. capsulatum* variant *duboisii*. *Trans Roy Soc Trop Med Hyg* 84:425–428, 1990.

Hoff, G.L., W.J. Bigler. The role of bats in the propagation and spread of histoplasmosis: A review. *J Wild Dis* 17:191–196, 1981.

Johnson, P.C., N. Khardori, A.F. Najjar, *et al*. Progressive disseminated histoplasmosis in patients with acquired immunodeficiency syndrome. *Am J Med* 85:152–158, 1988.

Kaplan, W. Epidemiology of the principal systemic mycoses of man and lower animals and the ecology of their etiologic agents. *J Am Vet Med Assoc* 163:1043–1047, 1973.

Loyd, J.E., R.M. Des Prez, R.A. Goodwin, Jr. *Histoplasma capsulatum*. *In* Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone Inc.; 1990.

Manson-Bahr, P.E.C., F.I.C. Apted. *Manson's Tropical Diseases*. 18th ed. London: Baillière-Tindall; 1982.

Menges, R.W., R.T. Habermann, L.A. Selby, H.R. Ellis, R.F. Behlow, C.D. Smith. A review and recent findings of histoplasmosis in animals. *Vet Med* 58:334–338, 1963.

Miranda Novales, M.G., F. Solórzano Santos, H. Díaz Ponce, *et al.* Histoplasmosis diseminada en pediatría. *Bol Med Hosp Infant Mex* 50:272–275, 1993.

Negroni, P. *Histoplasmosis: Diagnosis and Treatment*. Springfield: Thomas; 1965.

Negroni, P. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires: López; 1972.

Negroni, R., A. Taborda, A.M. Robles, A. Archevala. Itraconazole in the treatment of histoplasmosis associated with AIDS. *Mycoses* 35:281–287, 1992.

Organización Panamericana de la Salud (OPS). Histoplasmosis en México, 1979–1980. *Bol Epidemiol* 2:12–13, 1981.

Sanger, V.L. Histoplasmosis. In: Davis, J.W., L.H. Karstad, D.O. Trainer, eds. *Infectious Diseases of Wild Mammals*. Ames: Iowa State University Press; 1970.

Schlech, W.F., L.J. Wheat, J.L. Ho, M.L.V. French, R.J. Weeks, R.B. Kohler, *et al.* Recurrent urban histoplasmosis, Indianapolis, Indiana. 1980–1981. *Am J Epidemiol* 118:301–302, 1983.

Selby, L.A. Histoplasmosis. In: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Sweany, H.C., ed. *Histoplasmosis*. Springfield, Illinois: Thomas; 1960.

Waldman, R.J., A.C. England, R. Tauxe, T. Kline, R.J. Weeks, L.A. Ajello, *et al.* A winter outbreak of acute histoplasmosis in northern Michigan. *Am J Epidemiol* 117:68–75, 1983.

Wheat, J., R. Hafner, M. Wulfsohn, *et al.* Prevention of relapse of histoplasmosis with itraconazole in patients with acquired immunodeficiency syndrome. The National Institute of Allergy and Infectious Diseases. Clinical Trials and Mycoses Study Group Collaborators. *Ann Intern Med* 118:610–616, 1993.

Wheat, L.J., R.B. Kohler, R.P. Tewari. Diagnosis of disseminated histoplasmosis by detection of *Histoplasma capsulatum* antigen in serum and urine specimens. *N Engl J Med* 314:83–88, 1986.

MYCETOMA

B47.1 B47.0 ICD-10

ICD-10 B47.0 eumycetoma; B47.1 actinomycetoma

Madurella mycetomatis *Leptosphaeria Senegalensis* *M. grisea*

Pseudallescheria boydii … *Acremonium* … (*Petriellidium* *allescheria*) … *Exophiala Jeanselmei* … *Nocardia* … *otitidiscariarum* … *astroides* … *A.* … *actinomadura madurae* … *streptomyces* … *Pelletieri* *cochliobolus spicifer* … *Curvularia geniculata* …

(1990) …

1231 …

[illegible] *et al.,* 1988) [illegible] 1944 [illegible] 154 [illegible] 1982) [illegible] 1978 [illegible] (14) [illegible]

[illegible]

[illegible] 1990) [illegible]

[illegible]

[illegible] .(1987) [illegible]

[illegible] .(*et al.,*1989) [illegible]

[illegible]

[illegible] .(1990) [illegible]

[illegible] .(1975) [illegible]

[illegible]

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Brodey, R.S., H.F. Schryver, M.J. Deubler, W. Kaplan, L. Ajello. Mycetoma in a dog. *J Am Vet Med Assoc* 151:442–451, 1967.

Conant, N.F. Medical mycology. *In*: Dubos, R.J., J.G. Hirsch, eds. *Bacterial and Clinical Mycology*. 2nd ed. Philadelphia: Saunders; 1963.

Conant, N.F. Medical mycology. *In*: Dubos, R.J., J.G. Hirsch, eds. *Bacterial and Mycotic Infections of Man*. 4th ed. Philadelphia: Lippincott; 1965.

Develoux, M., J. Audoin, J. Tregner, *et al*. Mycetoma in the Republic of Niger: Clinical features and epidemiology. *Am J Med Trop Hyg* 38:386–390, 1988.

Friedman, D., J.V. Schuster, J.P. Pickett, *et al*. *Pseudallescheria boydii* keratomycosis in a horse. *J Am Vet Med Assoc* 195:616–618, 1989.

Jang, S.S., J.A. Popp. Eumycotic mycetoma in a dog caused by *Allescheria boydii*. *J Am Vet Med Assoc* 157:1071–1076, 1970.

Mahgoub, E.S. Serologic diagnosis of mycetoma. *In*: Pan American Health Organization. *Proceedings of the Third International Conference on the Mycoses*. Washington, D.C.: PAHO; 1975. (Scientific Publication 304).

Mahgoub, E.S. Agents of mycetoma. *In*: Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone Inc.; 1990.

Manson-Bahr, P.E.C., F.I.C. Apted. *Manson's Tropical Diseases*. 18th ed. London: Baillière-Tindall; 1982.

McEntee, M. Eumycotic mycetoma: Review and report of a cutaneous lesion caused by *Pseudallescheria boydii* in a horse. *J Am Vet Med Assoc* 191:1459–1461, 1987.

Segretain, G., F. Mariat. Mycetoma. *In*: Warren, K.S., A.A.F. Mahmoud, eds. *Tropical and Geographical Medicine*. New York: McGraw-Hill; 1984.

PROTOTHECOSIS

Prototheca ... 16 –2 ... *zopfii* ... *wickerhamii* ...

202 [illegible]

[illegible] 30 [illegible] (1983) [illegible]

[illegible] et al., 1984) [illegible] 90 [illegible] 32 [illegible] 1982 [illegible] 400 [illegible] et al., 1987 [illegible] 1984 [illegible] et al., 1985) [illegible] 120 [illegible] 17 [illegible] 5 [illegible] 192 [illegible] 10 [illegible] et al., 1997) [illegible] 130 [illegible]

[illegible] (1978) [illegible]

[illegible]

et al., 1987)

et al., 1984)

(1978)

et al., 1988)

Salmonis

(1977)

et al., 1988)

9 5 8 7

(1978)

94

[illegible]

Anderson, K.L., R.L. Walker. Sources of *Prototheca* spp. in a dairy herd environment. *J Am Vet Med Assoc* 193:553–556, 1988.

Dillberger, J.E., B. Homer, D. Daubert, N.H. Altman. Protothecosis in two cats. *J Am Vet Med Assoc* 192:1557–1559, 1988.

Gentles, J.C., P.M. Bond. Protothecosis of Atlantic salmon. *Sabouraudia* 15: 133–139, 1977.

Hodges, R.T., J.T.S. Holland, F.J.A. Neilson, N.M. Wallace. *Prototheca zopfii* mastitis in a herd of dairy cows. *N Z Vet J* 33:108–111, 1985.

Jones, J.W., H.W. McFadden, F.W. Chandler, W. Kaplan, D.H. Conner. Green algal infection in a human. *Am J Clin Pathol* 80:102–107, 1983.

Kaplan, W. Protothecosis and infections caused by morphologically similar green algae. *In:* Pan American Health Organization. *Proceedings of the Fourth International Conference on Mycoses: The Black and White Yeasts.* Washington, D.C.: PAHO; 1978. (Scientific Publication 356).

Kaplan, W., F.W. Chandler, C. Choudary, P.K. Ramachandran. Disseminated unicellular green algal infection in two sheep in India. *Am J Trop Med Hyg* 32:405–411, 1983.

Mayberry, D. Colorless alga can pollute water, cause mastitis. *Agri Res* March: 4–5, 1984. Cited in: Pore, R.S., *et al.* Occurrence of *Prototheca zopfii*, a mastitis pathogen, in milk. *Vet Microbiol* 15:315–323, 1987.

McDonald, J.S., J.L. Richard, N.F. Cheville. Natural and experimental bovine intramammary infection with *Prototheca zopfii*. *Am J Vet Res* 45:592–595, 1984.

Pore, R.S., T.A. Shahan, M.D. Pore, R. Blauwiekel. Occurrence of *Prototheca zopfii*, a mastitis pathogen, in milk. *Vet Microbiol* 15:315–323, 1987.

Rogers, R.J., M.D. Connole, J. Norton, A. Thomas, P.W. Ladds, J. Dickson. Lymphadenitis of cattle due to infection with green algae. *J Comp Pathol* 90:1–9, 1980.

RHINOSPORIDIOSIS [illegible]

ICD10 B48.1

[illegible] *Rhinosporidium* [illegible]

[illegible] 1970 [illegible] (66) [illegible] 108 [illegible] (1970) (13) [illegible] (13) [illegible] 50 [illegible] 5 [illegible] 30 [illegible] 4 [illegible] (1983) [illegible] 91000 [illegible] (1986 – 1948) [illegible] (1936) 33 [illegible] 72 [illegible] 1000 [illegible] *et al.,* 1989)

[illegible] 30 [illegible] (1984)

[illegible] (1991) [illegible] 24 [illegible]

1989)

et al., 1993)

Ajello, L., L.K. Georg, W. Kaplan, L. Kaufman. *Laboratory Manual for Medical Mycology*. Washington, D.C.: U.S. Government Printing Office; 1963. (Public Health Service Publication 994).

Carter, G.R., M.M. Chengappa. *Essentials of Veterinary Bacteriology and Mycology*. 4th ed. Philadelphia: Lea & Febiger; 1991.

Job, A., S. VanKateswaran, M. Mathan, *et al.* Medical therapy of rhinosporidiosis with dapsone. *J Laryngol Otol* 107:809–812, 1993.

Luciani, C.A. H.O. Toledo. *Rhinosporidium seeberi* en bovinos criollos (*Bos taurus*). *Vet Arg* 6(57):451–455, 1989.

Mahapatra, L.N. Rhinosporidiosis. *In*: Warren, K.S., A.A.F. Mahmoud, eds. *Tropical and Geographical Medicine*. New York: McGraw-Hill; 1984.

Mayorga, R. Prevalence of subcutaneous mycoses in Latin America. *In*: Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Moreira Díaz, E.E., B. Milán Batista, C.E. Mayor González, H. Yokoyama. Rinosporidiosis: estudio de 33 casos diagnosticados por biopsias en el Hospital Central de Maputo, desde 1944 hasta 1986. *Rev Cubana Med Trop* 41:461–472, 1989.

Negroni, P. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires: López; 1972.

Raju, G.C., M.H. Jamalabadi. Rhinosporidiosis in Trinidad. *Trop Geogr Med* 35: 257–258, 1983.

Sauerteig, E.M. Rhinosporidiosis in Barinas, Venezuela. *In*: Pan American Health Organization. *Proceedings of the Fifth International Conference on the Mycoses: Superficial, Cutaneous, and Subcutaneous Infections*. Washington, D.C.: PAHO; 1980. (Scientific Publication 396).

Utz, J.P. The mycoses. *In*: Beeson, P.B., W. McDermott, J.B. Wyngaarden, eds. *Cecil Textbook of Medicine*. 15th ed. Philadelphia: Saunders; 1979.

SPOROTRICHOSIS

B42.1 B42.0 ICD-10

B42.0 B42.7

ICD-10 B42.0 pulmonary sporotrichosis; B42.1 lymphocutaneous sporotrichosis; B42.7 disseminated sporotrichosis; B42.8 other forms of sporotrichosis

Sporothrix schenckii

[illegible] [37] [illegible]

[illegible]

[illegible] [3000] [illegible] (1983) [illegible] [84] [illegible] [1988] [illegible] [15] [illegible] [53] [illegible] *et al.*, 1992 [illegible] *et al.*, 1979) 1975–1971 [illegible] *Ceratocystis stenceras* [illegible] *et al.*, 1979) [illegible]

[illegible]

[illegible] 3 [illegible] 3 [illegible] [illegible] 80) [illegible] 5 [illegible] 3000 [illegible] (1962) [illegible] 90 [illegible] (50) [illegible] (50) [illegible]

[illegible] (1966) [illegible]

[illegible] *et al.,* [illegible] 35 [illegible] 200 – 100 [illegible]

.1992)

H. Farcinminosus

.(Cryptococcus

4

5

et al., 1990)

et al., 1989)

et al., 1989)

et

al., 1986)

et al., 1979)

et al., 1986)

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Benenson, A.S., ed. *Control of Communicable Diseases in Man*. 15th ed. An official report of the American Public Health Association. Washington, D.C.: American Public Health Association; 1990.

Bruner, D.W., J.H. Gillespie. *Hagan's Infectious Diseases of Domestic Animals*. 6th ed. Ithaca, New York: Comstock; 1973.

Coles, F.B., A. Schuchat, J.R. Hibbs, *et al*. A multistate outbreak of sporotrichosis associated with sphagnum moss. *Am J Epidemiol* 136:475–487, 1992.

Dunstan, R.W., K.A. Reimann, R.F. Langham. Feline sporotrichosis. Zoonosis update. *J Am Vet Med Assoc* 189:880–883, 1986.

Franco, L., I. Gómez, A. Restrepo. Saperconazole in the treatment of systemic and subcutaneous mycoses. *Int J Dermatol* 31:725–729, 1992.

Haqvi, S.H., P. Becherer, S. Gudipati. Ketoconazole treatment of a family with zoonotic sporotrichosis. *Scand J Infect Dis* 25:543–545, 1993.

Larsson, C.E., M.A. Goncalves, V.C. Araujo, *et al*. Esporotricosis felina: aspectos clínicos e zoonóticos. *Rev Inst Med Trop Sao Paulo* 31:351–358, 1989.

Lima, L.B., A.C. Pereira, Jr. Esprotricose-Inquerito epidemiológico. Importancia como doença profissional. *An Bras Dermatol* 56:243–248, 1981.

Lurie, H.I. Five unusual cases of sporotrichosis from South Africa showing lesions in muscles, bones, and viscera. *Br J Surg* 50:585–591, 1962.

Mackinnon, J.E. Ecology and epidemiology of sporotrichosis. *In:* Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Mayorga, R., A. Cáceres, C. Toriello, G. Gutiérrez, O. Álvarez, M.E. Ramírez, *et al*. Investigación de una zona endémica de esporotricosis en la región de la laguna de Ayarza, Guatemala. *Bol Oficina Sanit Panam* 87:20–34, 1979.

Mitchell, T.G. Micosis subcutáneas. *In:* Joklik, W.K., H.P. Willet, D.B. Amos, eds. *Zinsser Microbiología*. 17.ª ed. Buenos Aires: Editorial Médica Panamericana; 1983.

Negroni, B. *Micosis cutáneas y viscerales*. 5.ª ed. Buenos Aires; López; 1972.

Pluss, J.L., S.M. Opal. Pulmonary sporotrichosis: Review of treatment and outcome. *Medicine* 65:143–153, 1986.

Reed, K.D., F.M. Moore, G.E. Geiger, M.E. Stemper. Zoonotic transmission of sporotrichosis: Case report and review. *Clin Infect Dis* 16:384–387, 1993.

Richard, J.L. Sporotrichosis. In: Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Zamri-Saad, M., T.S. Salmiyah, S. Jasni, *et al.* Feline sporotrichosis: An increasingly important zoonotic disease in Malaysia. *Vet Rec* 127:480, 1990.

ZYGOMYCOSIS

B46.1 (**mucormycosis**) **B46.0 ICD-10** **B46.1** **B46.2** **B46.1** **B46.1**

ICD-10 B46.0 pulmonary mucormycosis; B46.1 chinocerebral mucormycosis; B46.2 gastrointestinal mucormycosis; B46.3 cutaneous mucormycosis; B46.4 disseminated mucormycosis; B46.8 other zygomycoses

(*Zygomycetes*) (*Mucorales*) *Entomophthorales*

(1982).

(1991).

(1990)

170 1980 1966 730

Basidiobolus haptosporus

75 112 1975

et al., 1980)

(1982)

Conidiobolus

3 700 55

incongruens

et al.,1992) *Entomophthorales*

(... et al., 1982)

mucoir Absidia

Rhizomucor Cunninghamella Rhizopus

(... 185 ...) (... et al., 1989)

(1990)

et al., 1984)

et al., 1980)

incongrueus

coronatus

(1982)

10 38 692 45 (1947)

et al., 1992)

1991)

266

(ranarum

982)

et al., 1987)

80–50

et al., 1985)

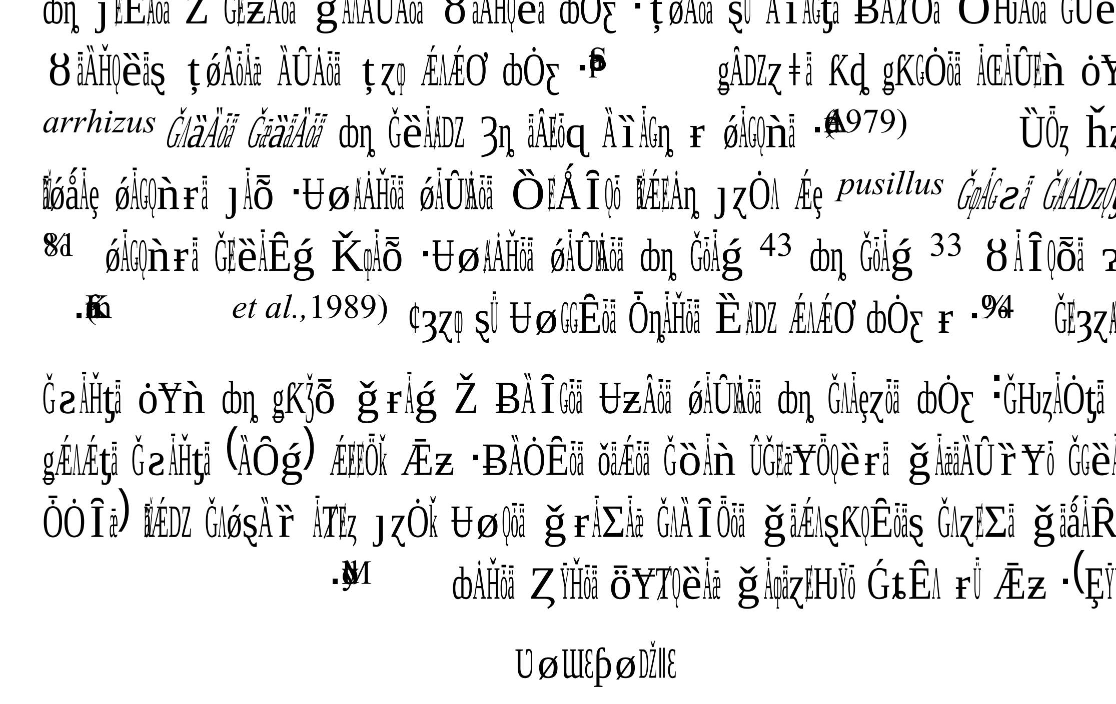
3 … 700 … 52

10^{-7}

et al., 1992)

1979)

Mucoraceae



Ader, P.L. Phycomycosis in fifteen dogs and two cats. *J Am Vet Med Assoc* 174:1216–1223, 1979.

Ainsworth, G.C., P.K.C. Austwick. *Fungal Diseases of Animals*. 2nd ed. Farnham Royal, Slough, United Kingdom: Commonwealth Agricultural Bureau; 1973.

Ajello, L., L.K. Georg, W. Kaplan, L. Kaufman. *Laboratory Manual for Medical Mycology*. Washington, D.C.: U.S. Government Printing Office; 1963. (Public Health Service Publication 994).

Bittencourt, A.L., G. Serra, M. Sadigursky, M.G.S. Araujo, M.C.S. Campos, L.C.M. Sampaio. Subcutaneous zygomycosis caused by *Basidiobolus haptosporus*: Presentation of a case mimicking Burkitt's lymphoma. *Am J Trop Med Hyg* 31:370–373, 1982.

Carter, G.R. *Diagnostic Procedures in Veterinary Microbiology*. 2nd ed. Springfield: Thomas; 1973.

Carter, G.R., M.M. Chengappa. *Essentials of Veterinary Bacteriology and Mycology*. 4th ed. Philadelphia: Lea & Febiger; 1991.

Carrigan, M.J., A.C. Small, G.H. Perry. Ovine nasal zygomycosis caused by *Conidiobolus incongruus*. *Aust Vet J* 69:237–240, 1992.

Chihaya, Y., K. Matsukawa, K. Ohshima, *et al.* A pathological study of bovine alimentary mycosis. *J Comp Pathol* 197:195–206, 1992.

Council for International Organizations of Medical Sciences (CIOMS). Vol 2: Infectious Diseases; Part 2: Mycoses. In: *International Nomenclature of Diseases*. Geneva: CIOMS; 1982.

González-Mendoza, A. Opportunistic mycoses. *In:* Pan American Health Organization. *Proceedings: International Symposium on Mycoses*. Washington, D.C.: PAHO; 1970. (Scientific Publication 205).

Greenham, R. Subcutaneous phycomycosis: Not always benign. *Lancet* 1:97:98, 1979.

Ingram, C.W., J. Sennesh, J.N. Cooper, J.R. Perfect. Disseminated zygomycosis: Report of four cases and review. *Rev Infect Dis* 11:741–754, 1989.

Kaufman, L., L.F. Turner, D.W. McLaughlin. Indirect enzyme-linked immunosorbent assay for zygomycosis. *J Clin Microbiol* 27:1979–1982, 1989.

Kelly, S., N. Gill, M.S.R. Hutt. Subcutaneous phycomycosis in Sierra Leone. *Trans Roy Soc Trop Med Hyg* 74:396–397, 1980.

Miller, R.I., R.S.F. Campbell. Clinical observations on equine phycomycosis. *Aust Vet J* 58:221–226, 1982.

Reed, W.M., C. Hanika, N.A.Q. Mehdi, C. Shackelford. Gastrointestinal zygomycosis in suckling pigs. *J Am Vet Med Assoc* 191:549–550, 1987.

Richard, J.L. Phycomycoses. *In:* Hubbert, W.T., W.F. McCulloch, P.R. Schnurrenberger, eds. *Diseases Transmitted from Animals to Man*. 6th ed. Springfield: Thomas; 1975.

Sanford, S.E., G.K.A. Josephson, E.H. Waters. Submandibulary and disseminated zygomycosis (mucormycosis) in feeder pigs. *J Am Vet Med Assoc* 186:171–174, 1985.

Soltys, M.A. *Bacteria and Fungi Pathogenic to Man and Animals*. London: Baillière-Tindall; 1963.

Sugar, A.M. Agents of mucormycosis and related species. *In:* Mandell, G.L., R.G. Douglas, Jr., J.E. Bennett, eds. *Principles and Practice of Infectious Diseases*. 3rd ed. New York: Churchill Livingstone Inc.; 1990.

Yangco, B.G., J.I. Okafor, D. TeStrake. *In vitro* susceptibilities of human and wild-type isolates of *Basidiobolus* and *Conidiobolus* species. *Antimicrob Agents Chemother* 25: 413–416, 1984.

ZOONOSES
AND COMMUNICABLE
DISEASES COMMON TO
MAN AND ANIMALS

Third edition

إن هذه الطبعة الثالثة من كتاب " الأمراض الحيوانية المصدر والأمراض السارية المشتركة بين الإنسان و الحيوانات" تتكون من ثلاثة أجزاء

الجزء الأول: الأمراض الناجمة عن الجراثيم والفطريات

الجزء الثاني: الأمراض الناجمة عن المتدثرات والريكتسيات، والفيروسات

الجزء الثالث: الأمراض الطفيلية

ونحن على ثقة أن هذا الكتاب ذو فائدة عظيمة للأطباء وطلبة كليات الطب والصحة العامة، والطب البيطري، ومعاهدها والباحثين وكل المهتمين بهذا الموضوع،
ومن المؤكد أن هذا الكتاب سيساهم في وضع المعارف موضع التنفيذ والاستفاده من المصادر العلمية البيطرية للوقاية وتحسين صحة الإنسان.

ISBN 97 89 290215721 الطبعة الثالثة
ISBN 97 89 290215738 الجزء الأول